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THE

EDINBURGH

MEDICAL JOURNAL.

Part First.

ORIGINAL COMMUNICATIONS.

I.—ON EVOLUTION.

By ALEXANDER DICKSON, M.D. Edin. & Dubl., LL.D., Professor of Botany in the University of Edinburgh.

(Portion of Lecture delivered to the Class of Botany, 6th May 1884, *revised for publication.)*

GENTLEMEN,—We have seen that the distinction between plants and animals is by no means a sharply defined one. And as we pursue our biological studies, whether in botany or in zoölogy, we ever encounter the difficulty of drawing absolutely fixed lines of demarcation. We find that the forms of plants or of animals, although in one sense exhibiting almost infinite diversity, yet reveal the most marvellously linked affinities or correspondences in structure; and, as expressive of this fact, we have the adage that "Nature makes no leap," *Natura non facit saltum.*

Palæontology, or the biological history of the globe in the past, reveals the fact that the earlier periods witnessed the introduction of the simpler organisms; and that then, as time went on, higher and higher types successively made their appearance: that, in fact, there is evidence of a progressive advance in development, as new types made their appearance.

Of the existence of a profound unity pervading the structure of the different organized forms, and of the subordination of more special characters to more general ones, and ultimately to a single general type, which may be conceived of as the most abstract expression of organization, there can be no reasonable doubt; and it is as little to be doubted that the earth has been, in its past history, the scene of the introduction of types of progressively greater and greater complexity.

These facts, of the existence of a morphological unity, and of the progressive elaboration of special types, have been the source of much speculation, and of great diversity of opinion among naturalists. Some have been content to accept the facts as they find them, and to investigate the homologies, correlating the special types, and as far as possible proceeding from these to the more generalized ones; but without presuming to explain how things came to be as they are, or at the most referring all to the creative design of a Supreme Being,—such reference being, of course, no explanation in the scientific sense, however well founded may be the moral or philosophical grounds for a belief in the supernatural.

Others again have attempted to show how the morphological unity and progressive advance of type may be accounted for by the operation of natural laws. Of such attempts the only one to which it is necessary for me to draw your attention is that of Charles Darwin, who is justly regarded by all—whether they adopt his views or not—as perhaps the greatest naturalist of any age or country. Starting from certain admitted facts—1st, Hereditary transmission; 2nd, Individual variation; and 3rd, The struggle for existence,—Darwin believed that he had in his hand the explanation at once of the morphological unity and of the progressive advance of type. The morphological unity he explained as due to consanguinity or to community of origin; while he explained the progressive advance of type as the result of individual variations, which, if they happened to be of a beneficial character, would, in the struggle for life with less favoured forms, cause their possessors to be *naturally selected* as the propagators of the race, and the transmitters of the beneficial peculiarities. By the occurrence of such favourable variations, and their accumulation by successive transmissions under natural selection, it was, Darwin conceived, possible to imagine the production of all existing types from a few pre-existing simple forms, or possibly from a single original form.

With regard to individual variation, it is not necessary for me to say much. The evidence of it is everywhere to be seen. You have only to look among yourselves to see that no two individuals, even of the same family, are alike. And among animals and plants the existence of individual variation is quite as apparent. Take, for example, the numerous breeds of dogs or of cattle; or, as perhaps the most marked case of all, the widely divergent races of domestic pigeons, among which are forms differing so much from each other that it has been asserted that, were the extreme forms submitted to an ornithologist, he would, if ignorant of their common origin, in all likelihood relegate them, not merely to distinct species, but to distinct genera. Or, as regards plants, you may note the wonderfully divergent races which have arisen, under the artificial selection of the cultivator, from the comparatively insignificant shore-plant *Brassica oleracea*, the original of the different kinds of greens, cabbage, Brussels-sprouts, cauliflower, kohlrabi, etc.

Again, as to the possible evolution of highly specialized forms by natural selection in the struggle for existence, I may refer to the familiar illustration given by Darwin of the supposed evolution of such an extreme type as the giraffe. You may imagine a herbivorous animal inhabiting an arid region where, for long periods, the ground-herbage may be destroyed by drought. In such circumstances, the animal would, at times, be driven to look for subsistence to the branches of shrubs and trees; and it might occur that the individuals whose necks happened to be a little longer than those of their competitors would, in a period of famine, have such an advantage, by being able to crop vegetation at a higher level, as to lead to their survival, while the shorter-necked ones would perish. The survivors would transmit their peculiarity to their descendants, and from time to time there might be similar struggles for existence, where, in like manner, the longer-necked individuals would be the survivors. In this way, the accumulation of small variations in the direction of elongation of the neck might be supposed to result in the wonderfully specialized type which now exists.

Although it may be admitted that some slow change or modification can hardly fail to take place, as the combined result of individual variation and natural selection in the struggle for life, yet the question at once arises, whether variation has, or has not, its limits. For the Darwinian doctrine of evolution, it is necessary to assume that variation is practically unlimited. But it seems almost certain that, at all events along given lines, there are limits to variation; and, in connexion with this, I may advert to what Professor Cleland of Glasgow has pointed out,—that it seems very strange, if variation be unlimited, that natural selection should have done nothing to advance the molluscan type during the countless ages that have elapsed since palæozoic times, when the cephalopoda were as highly organized as they are at the present day.

The Darwinian doctrine is manifestly no explanation of the beginnings of life; nor, indeed, does it profess to be one. And Darwin himself had to fall back on the idea of an initial creative act. It is quite certain that at one period there was no life on this earth, and scientific evidence does not justify the hypothesis of a spontaneous generation, or a production of an organism *de novo* out of unorganized material. Some, indeed, as Sir William Thomson, have attempted to shift the difficulty a little further back by imagining our first organisms to have come from another planet; but to this—whether it be in the least degree probable or not—it does not here seem necessary further to refer.

From many points of view, the Darwinian hypothesis is deeply interesting and attractive. It has been truly urged in its favour that the only *known* natural cause of resemblance between one organism and another is common inheritance or consanguinity.

The use, moreover, of such a hypothesis as a guiding line in homological investigation does not appear to be accompanied with any danger; since it is evident that the idea of family relationship or community of descent would closely involve what we strive to reach in our attempts at natural classification—viz., the correlation, not of arbitrarily chosen single characters, but of all the characters of the organization.

But it must always be borne in mind that from the mere fact of our not knowing of any other cause of resemblance between organisms it does not necessarily follow that there can be none. The mere fact of organisms exhibiting such correspondences as justify our arrangement of them in what are called natural groups or natural families does not necessitate the supposition of blood relationship, any more than the fact of the chemical elements exhibiting such correspondences as justify the chemist in arranging them in natural groups or natural families necessitates the supposition of *their* having a common origin. It may, indeed, be urged that there is possibly a deeper unity underlying even the chemical phenomena than has yet been proved,—a unity referred to in the words of our great poet:

> "That God which ever lives and loves,
> One God, one law, one element,
> And one far off divine event,
> To which the whole creation moves."

It may be that in some sense there is but one element. But this, though magnificent as a poetic vision, is not science.

Moreover, there are many serious difficulties in the way of acceptance of the Darwinian hypothesis.

1st, It seems almost inconceivable that the wonderfully refined perfection we see in the more highly-organized forms has resulted, hap-hazard, from the accumulation, under natural selection, of small variations.

2nd, It is, to say the least, very uncertain that the time required for evolution by natural selection is not much longer than that of the existence of the earth in a habitable condition. The variations whose accumulation is supposed to have led to the present result must presumably always have been small, as any sudden divergence would almost necessarily be of the nature of a monstrosity, and detrimental in character. And, besides this, we have to consider that in order to secure the persistence of variations in the direction of further development we must have the concurrence of conditions fatal to the individuals not possessing them; as otherwise such variations would be so diluted by intercrossing that any practical result would almost indefinitely be delayed.

3rd, Even admitting the imperfection of the geological record of past organisms, we can hardly conceive how there are not more traces of the innumerable intermediate forms which, on the hypothesis, must have existed.

4th, It is to be observed, as a distinction between "natural species" and the varieties of a historically-known common stock, that while, as a rule, the progeny produced from crossing of two species are infertile among themselves, there is yet, so far as I am aware, no such infertility of the offspring of even the most divergent varieties of a historically-known common stock.

In attempting to give you an idea of this question, I do not claim to have added much, or perhaps anything, to the previous discussions of it. I would not dogmatically assert the Darwinian doctrine to be false: all I would say is, that while it presents some attractive features it is, at the same time, beset with very serious difficulties. And I cannot too strongly urge you to adopt the judicious reserve displayed by one of our recent distinguished visitors, Professor Virchow, whose recent address to us on this subject[1] is in all respects admirable, and whose trenchant criticism is much required as a check upon the dogmatism so prevalent among modern biologists.

II.—ON HÆMORRHAGIC LUPUS OF THE FEMALE GENITAL ORGANS.

By J. MATTHEWS DUNCAN, M.D., LL.D., F.R.C.P.L. & E.

(*Read before the Edinburgh Obstetrical Society*, 14*th May* 1884.)

I NARRATE these cases merely as rare experience in practice, wishing, meantime, to avoid discussion of the nature of the disease. In accordance with general practice I designate it lupus, yet histological investigation by skilled colleagues shows that it has not the structural peculiarities of most examples of the characteristic and well-known disease in other parts of the body. The name of lupus is retained in order to avoid change, and because the characters of the disease bring it into alliance with the ordinary run of such cases. It has many varieties,—patches of redness, uniform or nodulated; hypertrophies; ulcerations coming and healing spontaneously, or being cured; inflammations coming and going, or being cured; the affected parts generally without any increase of sensitiveness, sometimes, especially in ulcerations, with unnatural want of sensitiveness: sometimes the affected parts are extremely sensitive. Of course, when inflamed they are sensitive and tender. There is generally little tendency to bleed on handling, or at any time.

The variety of lupus which I now illustrate by four cases is either simply ulcerative or exedens, and the specialty is bleeding.

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[1] Address delivered at the Students' Reception of the University Guests at the Tercentenary Festival, on the 18th of April 1884. This was reported at the time in the newspapers, and is reprinted in *Account of the Tercentenary Festival of the University of Edinburgh*, edited by Dr Marsden, p. 181. Blackwood & Sons: 1884.

This may be slight, and of long or short duration; or it may be profuse, and of short duration. In one of my cases of slight loss it endured, with intermissions, for fourteen years. In another it was unexpected, sudden, and so profuse as to cause alarming faintness.

In two cases the ulcerated surfaces bled readily and freely on being touched. In the case in which the bleeding was most copious, the parts affected did not bleed at all on repeated examination or handling; and the part from which blood was seen to flow, had, on the day following the hæmorrhage, as well as before it, the appearance of a healthy pale ulcer, rather callous.

I have said that in these four cases there was ulceration, superficial or deep, but I now add that the disease has, in my opinion, alliance with a form of chronic vaginitis, seen mostly in women after the menopause, and called senile. In this disease the vagina has a patchy or mapped appearance in many cases. There may be no discharge, or a more or less copious thin pus may come. Often there is a slight oozing of blood. This form of vaginitis seems to have connexion with the frequently found vaginal strictures of old women.

CASE I.—Mrs G., æt. 57, multipara, last child born 17 years ago, consulted me on account of a copious bleeding from the vulva. She had suffered much from piles, and had undergone three operations. Five years before her present visit I had carefully examined her, when complaining of a pain in the left inguinal region, and then a small urethral caruncle, red, not tender, was observed, and on the left side of the urethral orifice a similar flat, indolent redness, and there were small external piles. Now, that is five years afterwards, and after a free bleeding, which alarmed and weakened her, she has a slight vulvar aching after walking; the urethral caruncle has increased in size to be about as big as a small pea, and it projects from the urethra; the red spot on its left side is now a pale ulcerated pit that would hold a large pea. This part is not tender, does not bleed when touched; but touching elicits from the very intelligent patient the spontaneous remark that it was from that left side of the water passage that the blood flowed. She knew well bleeding from piles, and at the time referred to none came from them.

CASE II.—L. G., æt. 38, single, healthy-looking, well nourished, describes herself as having begun to menstruate at 19. The loss has been always profuse, and the so-called intermenstrual period has rarely been a fortnight. For three or four years has had pain about the umbilical region, and a whitish discharge in the intervals between bloody discharges. In all other respects she is healthy.

On inquiry as to symptoms of menstrual molimen no satisfaction could be obtained, but it was held that there was no ground for regarding the bleeding as menstrual.

On physical examination no disease is discovered anywhere except in the pelvis. There is entire absence of hymeneal obstruction and tenderness. The vagina contains blood, which can be made out to proceed from the cervix. The uterus is not naturally or freely mobile, and when it is pulled forwards by a probe inserted in its cavity, tight bands are felt behind it. In other respects the uterus, as a whole, is healthy. The cervix is not enlarged, and cystalline mucus can be seen in it. On part of its surface is seen a superficial abrasion or ulceration, unlike any ordinary abrasion or erosion, angular in outline, and covering not above a fourth part of the visible cervical surface, and dipping into the cervical canal, where it cannot be seen. This ulcerated surface bleeds readily when touched, and no other bleeding can be discovered.

A zinc-alum stick was twice used, and by it the appearance of the ulcer was changed, but only in minor characters; and, while she remained under observation for about three weeks, the bloody loss was almost entirely arrested.

CASE III.—E. R., æt. 18, a fine healthy-looking girl, single, has had three sisters who died of phthisis. Three years ago she had a blow on the left breast, which became swollen and tender. Eleven months ago had an abscess in a labium. For ten months has had a discharge from the vagina, sometimes yellow, sometimes dark brown, and during the same time painful micturition.

No disease is discovered, except that of the hymen and vagina. There is some hymeneal obstruction to the examining finger. The hymen is thickened and redder than natural, tender, and having some small projecting nodules of the size of a large coriander seed. The vaginal surface is, for the most part, pale, and covered with dense white mucus; and there are considerable irregularly outlined patches, very dark red, denuded, and like the surface of a chronic inverted uterus. Of these patches a large one, near the surface of the vagina, is seen to bleed freely, blood oozing from its whole surface while exposed.

About two hours after examination she began to bleed copiously, losing about eight ounces within a very short time. An injection of a weak solution of perchloride of iron failing to arrest it, the vagina was packed with a plug which stopped it. Two days afterwards a smaller hæmorrhage occurred.

The case was treated by passing a strip of lint, soaked in lotio nigra, the whole length of the vagina, twice daily, the lint being left in the passage. She rapidly improved, and in eighteen days after the treatment left the hospital, with the vagina apparently healthy, the hymen still red and thickened.

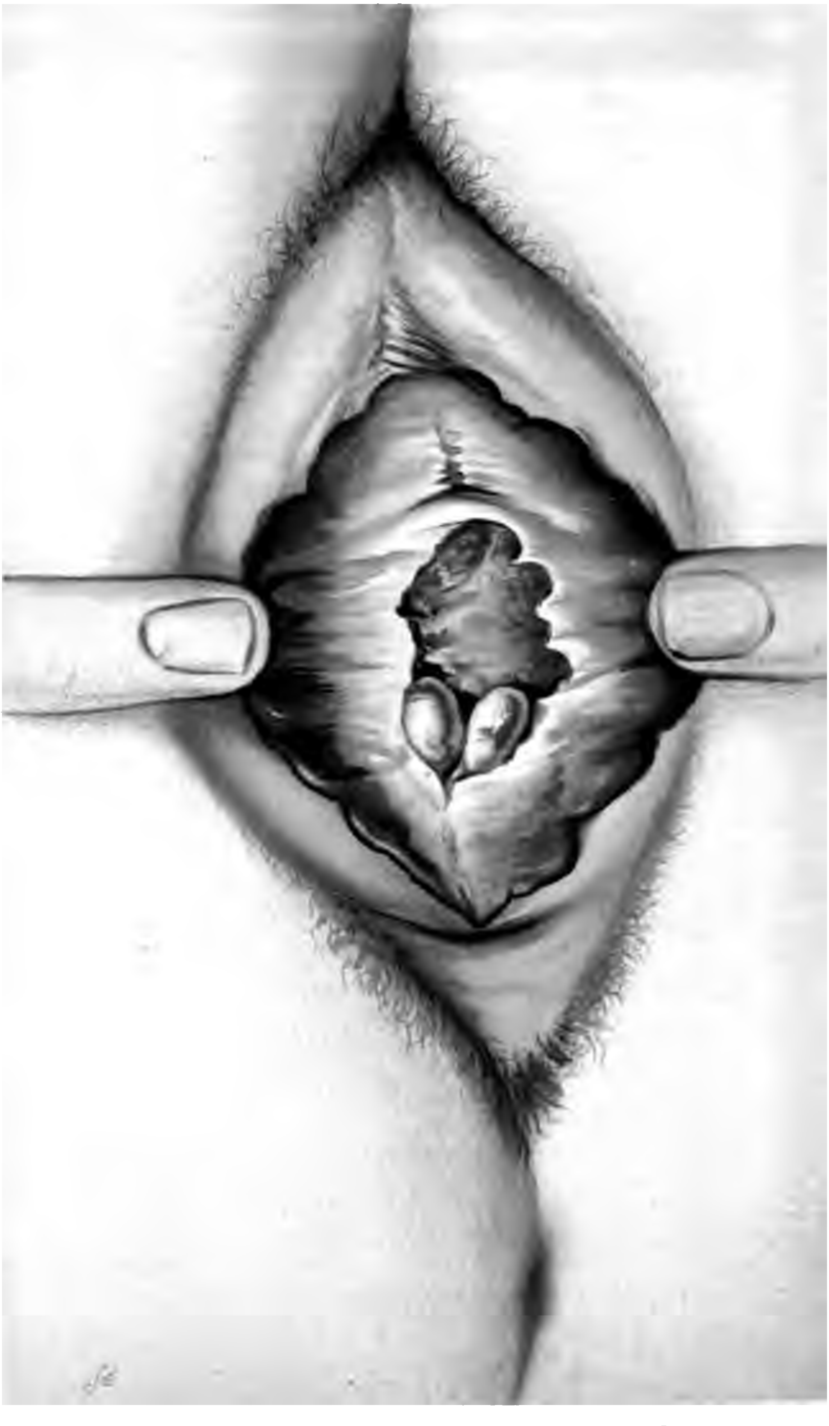
She returned fourteen days after leaving the hospital, stating that brownish-yellow discharge had recommenced, with much vulvar irritation, and occasional losses of bright blood, not so considerable as those which occurred in the hospital. Now, at the posterior margin of the urethra is a small bilobed growth, of the size of a split pea. The vestibule, including the whole surface around the vaginal orifice, is red, and bleeds slightly when examined. The hymen is thickened as before. The vagina is uniformly dark red, but not so deep in colour as formerly, and bleeding is observed from the crests of the rugæ. The cervix uteri is natural.

CASE IV.—Mrs W., aged 42, was married at 20, and has been a widow 3½ years, has borne one child, eighteen years ago, and has had no miscarriages. Catamenia began at 15, and have been regular, and continue so. Nine months ago, between two monthly periods, she had a hæmorrhage which lasted for two days. For ten years she has had a yellow discharge, and for the same period she has had some vague dysmenorrhœa. She is a well-nourished, healthy looking woman, and makes no complaint. Urination and defecation natural.

At midnight, while on the street, she was taken with flooding and became faint, and was brought to St Bartholomew's Hospital by the police.

On examination she was found to be healthy except the conditions to be now stated. The whole lower wall of the urethra is absent. At the junction of the urethra and bladder is considerable nodulated thickening, not ulcerated. The little finger passes freely into the bladder, the ring at the neck of the bladder being rigid. Bladder measures 4½ inches from fundus to its opening into the vagina; it is slightly tender to touch by bougie. Inside the left labium and reaching nearly to its margin is a pale healthy looking ulcer, irregular in shape, of the extent of a florin, with sharp cut, slightly indurated edges, which are red; it extends into the vagina. The ulcer does not bleed when touched, nor is it sensitive. On the right side of the vagina is an indurated ulceration of slight extent, folded on itself, looking like an incision; of this a little bit is excised for microscopical investigation, and the incision bleeds very little. The nymphæ are prominent, soft, and form a frilled projection around the whole vaginal orifice. Two large caruncles are on the posterior margin of the vaginal orifice. The cervix uteri and remains of vagina are healthy. Inguinal glands not enlarged.

At 9 P.M. the patient suddenly felt desire to micturate, and, on using the pan, found she was losing a large quantity of blood. The hæmorrhage seemed arterial, and Dr Hurry could see an artery pulsating in the left ulcerated surface. Perchloride of iron stopped the bleeding, but it returned in ten minutes. One vessel was now tied, and another twisted, and the vagina plugged. The hæmorrhage ceased. The blood lost was about ten ounces. About 36 hours afterwards the ulcers presented no indication of anything having occurred, no indication of where the ligature had been applied.



Dr MATTHEWS DUNCAN ON LUPUS.
CASE OF M.W.

The ulcerated parts were seared freely by a wire kept red hot by galvanism, and were dressed daily with iodoform. In about a fortnight the ulcerations were somewhat contracted and lessened, and less hard on the edges. The ulceration on the right side of the vaginal orifice was healed.

III.—CASE OF CÆSAREAN HYSTERO-OÖPHORECTOMY, OR PORRO'S OPERATION.

By ALEXANDER RUSSELL SIMPSON, M.D., F.R.S.E., Professor of Midwifery and the Diseases of Women and Children in the University of Edinburgh.

(*Communicated to the Edinburgh Obstetrical Society, 12th March* 1884.)

WHEN I made my morning visit at the Maternity on 30th January, I was informed by Dr Smith, one of the house-surgeons, that he had a case outside which he should like me to see. I at once accompanied him to a miserable hovel in the West Port, and found there a poorly nourished, wretched looking woman in the pains of labour. On inquiry, she was doubtful about her exact age, and stated this to be her second pregnancy—her first child having been still-born about two years before, after a labour of three days' duration. Her condition during her present pregnancy had been fair, only she had been troubled with incontinence of urine during the later months. At the time of our visit she had been more than twelve hours in labour.

Examination of the abdomen showed the uterine tumour markedly projecting forwards in front of and close to the lower part of the ensiform cartilage, and firmly invested by the thin abdominal walls which were tensely stretched over it. The tumour was nearly in the middle line, deviating but slightly to the right side. Just below the umbilicus there was a depression in the abdominal walls between the uterine projection and a mass which bulged above the symphysis pubis, and occupied the hypogastric and left inguinal regions. It reminded one of the appearance of the over-distended bladder. On palpation the uterus was felt almost continuously contracted. A transverse furrow was traceable, and was felt between the general uterine tumour and the lower projection, which was solid and continuous with the uterus. Auscultation at 11 A.M. (the hour of our visit) recognised the fœtal heart sounds, right dorso-anterior, already somewhat slow and feeble. Examination of the external pudenda showed a hard chancre on the right labium. Per vaginam the vaginal and pelvic cavities were occupied by a portion of the hard mass which blocked up the brim, and which was diagnosed to be a fibroid tumour growing from the lower uterine segment, and extending between the layers of the broad ligament to the left side of the pelvis. The os uteri, partially expanded, could be reached at the pelvic brim close to the right sacro-iliac synchondrosis, the membranes still unbroken, and the head of the child, on bimanual pressure, felt movable above.

I ordered a hypodermic injection of morphia; and her instantaneous removal to the Maternity Hospital; and summoned the rest of the Maternity staff. Her husband and the patient herself objected to this procedure, on the ground that as she had been delivered once naturally, nature might terminate this labour also.

It was not till 3.30 P.M., that owing to the persuasive powers of a priest, the patient was brought to the Maternity Hospital. The fœtal heart had now ceased to beat, and the vaginal discharge was sanious and fœtid. The patient having been anæsthetized, she was examined by my colleagues Drs Moir, Halliday Croom, and Macdonald, and who confirmed me in my first idea, viz., that laparotomy alone could save the patient.

Operation.—Besides my colleagues whom I have named, there were present Drs Hart, Barbour, Ballantyne, and Professor Arnott of Bombay, as well as the house-surgeons and some students. The bladder was emptied, and the urine found to be highly albuminous.

The abdominal walls, genitals, and vaginal canal having been carefully cleansed and douched with 1 in 2000 corrosive sublimate solution, the abdominal cavity was opened by an incision extending from 2¼ in. above the umbilicus to within 2 in. of the symphysis pubis, and the uterus was made to project through the opening. A loop of strong cord was now carried round the uterus, as far down as the tumour permitted, and below the head of the child. The edges of the abdominal wound being kept closely adapted by Dr Croom, by an incision through the anterior wall of the uterus, beginning at the fundus, I reached and exposed the breech, and easily extracted the infant. The uterus gave out a few drops of blood, and the turbid and green-tinted amniotic fluid which escaped was immediately sponged up. The uterus showed no tendency to contract.

Lawson Tait's clamp was applied round the broad ligaments and lower part of the uterus at the site of the constricting cord, and the mass above cut off. The section on the right side passed outside the right ovary and lower part of the uterine body, towards the left side it sloped close up to the left Fallopian tube, and cut through the left ovary. There was no escape of any blood or other fluid into the peritoneal cavity, which was carefully sponged out. The long wound was brought together by a series of silk sutures. The bulk of the tumour just within the abdominal walls made the adaptation of the edges of the wound to the stump brought up into its lower part somewhat difficult. The stump and wound were dusted freely with equal parts of iodoform and bismuth, and dressed with iodoform gauze. After operation—pulse 92, firm and regular.

I give the progress of the case from the Maternity Schedule:—

Jan. 30 (1st day).—Evening temp. 98°·4; p. 80. At 7 P.M., sick and retching, some pain complained of. Ordered ice to suck. 10 P.M., urine drawn off; no oozing.

Jan. 31 (2nd day).—Morning temp. 99°·2; p. 100; slept well; urine drawn off every four hours; dressed at 10.

Evening.—Incontinence of urine since mid-day; sick and spasmodic abdominal pains during afternoon. Afternoon temp. 100°·2; ice to abdomen. Evening temp. 98°·4; pulse 92; lies with legs drawn up; some tympanitis. Ordered 15 grains potassium bromide.

Feb. 1 (3rd day).—Bromide repeated at 2 A.M.; slept 3 hours; vomits frequently; respiration 16; breathing pains her; temp. 99°·8; p. 114. Patient looks drowsy; knees and legs drawn up; tympanitis increased; clamp depressed.

Afternoon.—Patient cries out with pain. Ice bags to abdomen. P. 112 to-night; temp. 97°·6; double dose bromide and chloral.

Feb. 2 (4th day).—No sleep; very restless; temp. 98°·4; p. 104; ordered brandy and digitalis. Evening temp. 97°; pulse 112; urine albuminous, $\frac{1}{10}$.

Feb. 3 (5th day).—P. 116; temp. 97°; restless; no sickness; quite sensible; no increase in distension. Evening temp. 101°; p. 128; evidently sinking.

Feb. 4 (6th day).—Restless; delirious; bowels moved twice freely. Evening temp. 98°; p. 128. Morning temp. 98°; p. 120; hiccupping all day.

Feb. 5 (7th day).—Patient excited, crying out; slept none. P. 124, weak; temp. 98°; looks collapsed. Sank gradually, and died at 10 P.M.

When I first saw the patient whose history I have just related, and judged that there was no hope of her delivery except by a Cæsarean operation, I thought that the conditions gave fair hope of a successful result; but as the hours passed by in her vain trust that the labour would end of itself, all favouring chances passed away, and when the operation was at last begun with the fading daylight and finished with candle-light, the prognosis for the woman was utterly dark, and her child was already dead.

In carrying out the operation I judged it best to follow Müller's modification of causing the uterus to project unopened through the wound in the abdominal walls, and constricting it with a ligature before opening it for two reasons: *First*, There was no hope of saving the child whose heart-beats were no longer audible, and the mother could thus be saved loss of blood without endangering fœtal life through interruption of placental circulation. *Secondly*, As it was probable that decomposition had already set in in the uterine contents, it was important to make full provision against allowing entrance of any uterine fluid into the peritoneal cavity; this was effectually secured by opening the uterus, as it were outside the abdominal wound, the edges of which were kept firmly closed behind it.

IV.—TRAUMATIC STRICTURE: ITS TREATMENT BY SUPRA-PUBIC CYSTOTOMY.

By JOHN DUNCAN, M.A., F.R.C.S.E., Surgeon to the Royal Infirmary, Edinburgh.

(*Read before the Medico-Chirurgical Society of Edinburgh, 4th June* 1884.)

IT is well known that stricture of the urethra is most severe and dangerous when traumatic in origin. This arises from various causes. The wound which produces a stricture necessarily involves the mucous membrane of the urethra, and so substitutes for it cicatricial and contracting tissue, while a stricture from gonorrhœa may be strictly limited to the submucous tissue. In the former case healing takes place under direct irritation from the passage of urine, and consequently with a larger outpouring of inflammatory products.

Again, a much larger part of the circumference of the urethra is apt to be affected in traumatic stricture. This circumferential character of the injury is indeed of essential importance. If a longitudinal wound be made in any canal it is not prone to lead to diminution of its calibre. Perhaps the only exception to this lies in the air passages. After tracheotomy, and like operations, there is a tendency to lessening of the lumen, which may sometimes give rise to much trouble. This, however, comes from an exuberance of granulations—an over-growth, not a contraction of scar tissue. Last summer, in a girl of ten, who was sent to my ward by Dr M'Bride on account of extensive papillomata of the larynx, I opened the thyroid cartilage and cleared away the growths. A tube was kept in only for five days above the cricoid cartilage. Everything went admirably, and the patient was out of the Infirmary three weeks after the operation. In two months she came back with considerable and increasing dyspnœa, and on examination with the laryngoscope it was found that in the situation of the scar was a smooth, well-defined, sessile swelling, which greatly diminished the space for breathing, and which necessitated the performance of tracheotomy to keep the patient in safety. This curious tendency, then, of wounds in the windpipe does not invalidate the fact that longitudinal wounds do not lead to stricture in any of the passages in the body. It is an outgrowth, not a contraction. In the urethra, lithotomy, median or lateral, does not produce contraction, the surgeon opens the canal freely to remove foreign bodies, and even incises for the relief of a stricture which has, perhaps, been produced by a previous wound without the slightest fear of establishing thereby any or further impediment to the flow of urine. It is far otherwise with transverse wounds. Wherever they occur they tend to diminish the lumen. The tendency may be overcome in various ways, but it always exists. In the air passages it may be prevented by the rigidity of their walls. An interesting illustration of the tendency and its prevention is to be found in preternatural anus. There the upper orifice is kept patent by the passage of the fæces, while the lower contracts, so that the entry even of a probe may be difficult. But the most striking example of the law is found in urethral surgery. The surgeon who amputates the penis must take special precautions against contraction of the orifice, and traumatic stricture is severe and dangerous precisely because it results from a transverse wound. The reason for this plainly lies in the fact that it is the new material which contracts. If the wound be longitudinal the resulting contraction is only from end to end, and the tube may be thereby so far shortened, but cannot be diminished in circumference. On the other hand, if it be transverse, contraction takes place in the length of the wound and so lessens the lumen of the passage.

But yet another cause is constantly in operation to render traumatic stricture a serious disease. It is usually produced by very violent contusion, and a considerable portion of the urethra and its surroundings is apt to be injured, contused, or irregularly torn. The formative material is therefore necessarily considerable, and the contraction commensurate with its quantity.

For these reasons, then, traumatic stricture is a serious condition, and its treatment at once important and difficult.

I wish to bring before the Society a short account of certain examples of this condition, which present some peculiarities, and one of which is necessarily very rare.

In the early stages of an injury of the urethra we have to fear present extravasation of urine as well as future stricture.

If a patient has received a severe injury in the perinæum, and has passed a quantity of blood but not yet made any attempt to urinate, care must be taken that no urine pass over the injured spot until the wound has so far healed that it will not sustain harm thereby. This is done by the regular passage of the catheter, with stringent antiseptic precautions. As a rule, this may be easily enough accomplished. Difficulties, however, arise from two causes.

1. The nature or form of the injury may present an insuperable obstacle. The soft textures may be so smashed that it is hopeless by any amount of groping in the dark to find the torn end of the canal, or the interposition of portions of mucous membrane or other tissue may oppose an entrance to the bladder. In such cases we have two alternatives—perinæal section and aspiration. I distinctly prefer the former. Its greater safety, in view of extravasation or abscess, and the probability that in any event we must ultimately resort to it, are powerful arguments. A patient still comes now and again to the Infirmary to have an instrument passed, who furnished a good illustration at once of this method of treatment and of the peculiarities met with in individual cases. Engaged as a carpenter in the construction of the Waverley

Market Hall in this city, he fell from a height of nearly 20 feet astride a beam. He was only brought to the Infirmary about six hours afterwards, on account of inability to pass water. I found his perinæum enormously distended with extravasated blood, and, failing to pass a catheter, with the assistance of my colleague Dr Maclaren I made an incision in the middle line. The posterior end of the torn urethra was with difficulty found after careful search. I was still unable, however, to reach the bladder, and on introducing my finger into the rectum, found that the obstacle lay in a greatly enlarged prostate. Various forms of catheter were tried without success. It was imperative to relieve the bladder immediately; and so, for the only time in my professional experience, I forced the prostate and tied in a catheter. Even in this case, then, I did not aspirate, being influenced by the consideration that in perforating the prostate I did not add greatly to the severity of the wound, and that I established a route to the bladder which might be useful in the future.

2. It may become impossible to pass a catheter on account of the inflammatory swelling which invariably comes on soon after the injury. In such cases I have on several occasions aspirated with complete success. If the catheter have been successfully passed at first, the chances are that you will again succeed when the inflammation subsides. Sometimes these cases do well without aspiration. I was called two years ago to see a patient in Fountainbridge who had ruptured his urethra by a fall. For three days I easily and regularly drew off the urine. On the fourth day I failed with the same catheter, which had hitherto passed with ease. I went home to procure other instruments, among them the aspirator; but on my return found that he had been unable longer to restrain himself. Urine had flowed freely, but with much pain. No evil whatever followed; and but for a stricture which requires occasional attention, the patient is perfectly well. Such exceptional good fortune is not, however, to be relied on. If the catheter be left off even after a week or ten days, it is apt to be followed by perinæal abscess. I have not after a week met with direct and immediate extravasation; but abscess is in my experience common, and if not incised early may, of course, become diffuse.

These early difficulties overcome, the surgeon is brought face to face with a tendency to contraction so strong that it requires the utmost skill and patience to overcome it. But with patience stricture may be prevented by the regular passage of bougies every few days. Very frequent, even daily, use is sometimes necessary just at the period of fibrination, and with most the occasional passage of an instrument is required for the rest of life.

It frequently happens, however, most often from negligence on the part of the patient, that the stricture is fully formed ere the surgeon has to deal with it. In principle the treatment then differs in no respect from that of the other variety of stricture. In practice the more severe forms of operation are more often required. Success with ordinary dilatation is not so certain as in gonorrhœal stricture. When Holt's instrument can be passed, it will generally serve our purpose. But in one case I found it impossible to tear the stricture with the utmost force, and was obliged to resort to internal urethrotomy, while in others the urethra is so completely destroyed that perinæal section in one form or other is imperative. The following case may serve to illustrate the difficulties which sometimes are met with. The operation devised is one which, although adapted to but a small number of cases, in them would seem likely to be useful and satisfactory.

John Dunbar, æt. 28, a crofter from Caithness, was admitted to the Royal Infirmary on 21st January 1883. His medical history, family and personal, was good, and although somewhat thin and pale, he was generally in sound health.

On the 2nd of May 1882 Dunbar, with five or six others, was engaged in launching one of the large and heavy boats in which the herring fishery is usually pursued. The attitude in which the traction is made is with the back towards the boat. By some want of simultaneous action the boat was allowed to heel over, and Dunbar was crushed to the earth, the swell of the boat's side falling on his buttock.

It is difficult to make out the precise sequence of events after this. It would appear, however, that he had first retention of urine, with escape of blood from the penis. The catheter was successfully used for a few days, but being then discontinued because he could pass his water, perineal abscess followed. After that time he passed all his urine through the perinæum.

On admission there was found to be a large orifice anterior to the scrotum, from which a passage led into the urethra somewhat farther back. The perinæum was a mass of densely-indurated texture, with at least half-a-dozen fistulæ, from which the urine poured as from the rose of a watering-pan when he made water. It is worthy of remark that there was practically no cystitis. The patient was able to retain his urine for two or three hours during the day, and was little disturbed at night.

Repeated and patient attempts were made to pass instruments into the bladder, but without success. Occasionally, both by the urethra and through the fistulæ, flexible bougies of small size could be made to enter to the full extent, but with the finger in the rectum it could be ascertained that the course they took was to the right of the mesial plane, and farther distant from the bowel than the normal urethra.

On the 13th of March, having come to the conclusion that the stricture was truly impermeable, I passed a full-sized bougie as far as it would go—that is, a short distance behind the scrotum—

and by an incision in the middle line of the perinæum reached its point. I then passed a silk stitch through the divided mucous membrane of the urethra on each side, and proceeded to dissect carefully backwards. Soon the mucous membrane entirely disappeared, and only the tracks of the fistulæ could be seen. By passing probes it was ascertained that several of these communicated with each other. Following this main route, we were ultimately led to a cavity of considerable size, containing a little purulent urine and a piece of necrosed bone about the size of a pea. This cavity lay immediately behind the symphysis pubis, but perhaps a very little to the right. I now made a most careful search for the orifice by which the bladder communicated with the wound, systematically pushing the probe against every portion of the posterior and lateral surface of the incision. All the fistulæ communicated with the wound, but I was unable to detect the route thence to the bladder. I therefore passed a drainage tube into the abscess cavity, and sent the patient to bed.

On two subsequent occasions, when granulations covered the wound, I made farther nugatory attempts to reach the bladder. On the failure of these I contented myself with the regular passage of a full-sized bougie to the cavity behind the pubes, and ultimately the wound in the perinæum entirely healed. The patient was now so free from inconvenience, passing water partly per urethram, partly by the orifice at the root of the penis, that he left without permission on the 14th of May to escape the regular passage of instruments on which I insisted, and the closure of the sole remaining anterior fistula, which I purposed doing by a plastic operation.

Dunbar came back to us on 4th November 1883, or six months after going home. He had remained perfectly well till ten days before, *i.e.*, 25th October 1883. Pain was felt on that day, he thinks in consequence of a strain. He was unable to pass water for sixteen hours, till on the morning of the 26th it "burst," to use his own expression, through the perinæum. On admission a fistula was found at the posterior part of the perinæal cicatrix. He passed urine partly through it, partly by the anterior opening. He had suffered so severely in this attack that he was willing to submit to any means of cure.

After another failure to reach the bladder with the catheter, and in view of the result of the former operation, I determined to proceed differently. The patient was directed to retain his urine for two hours before the time of operation on the 14th November. By an incision in the middle line I easily reached and opened the bladder above the pubes. I found that a bougie passed into the urethra from within traversed the prostatic portion of the urethra and was then stopped. I directed it to be held in that position. Another bougie was then passed by the penis as far as it would go. It only remained to bring the two into contact, which I quickly did by cutting down upon the latter, and then, guided by a finger in the rectum, dissecting backwards till I came to the point of the former. A full-sized catheter was then passed into the bladder and tied in position. An indiarubber drainage tube was placed in the supra-pubic wound without entering the bladder, and two or three stitches brought the rest of the abdominal wound together. The wound in the bladder had been made only large enough to admit the finger, and came absolutely together without stitches when the bladder contracted, so that I thought sutures in it would be merely a source of irritation.

The catheter was kept in the bladder for a week, and daily washings with a one per cent. solution of carbolic acid were made through it. After its withdrawal a No. 12 bougie was passed every third day. The supra-pubic wound was healed on 12th December, the perinæal on 17th December; and the patient, being absolutely well in every respect, again went away without permission on 24th December, probably with a view to Christmas festivities at home.

V.—ON A CASE OF PATENT DUCTUS ARTERIOSUS, WITH ANEURISM OF THE PULMONARY ARTERY.

By James Foulis, M.D., Edinburgh.

(*Read before the Medico-Chirurgical Society of Edinburgh, 7th May* 1884.)

Mr President and Gentlemen,—One morning, early in the year 1882, a young girl came to my consulting-room for advice for the following distressing symptoms:—Great palpitation of the heart on slight exertion, breathlessness, and buzzing noises in her chest, in her head and ears. She was very nervous, and her face bore an extremely anxious expression. The nose and lips were pale, with a slightly bluish tinge, and the conjunctival mucous membranes were very anæmic and flabby. There was no cough. Concluding from her pale face and lips that her symptoms were in a great measure due to bloodlessness, I made a very superficial examination at this time; but on placing the stethoscope over the base of the heart, I heard a loud blowing murmur, and at the same time felt a strong heaving impulse accompany the heart's systole. Immediately following the systolic murmur, another softer murmur was heard. These extraordinary murmurs puzzled me very much, as they were not at all like the ordinary humming murmurs of anæmia. I at once prescribed iron and arsenic and rest, and obtained her promise that she would come back to me in three weeks time for further examination and advice, hoping by that time that her bloodlessness would have disappeared, and I should be better able to localize the murmurs and discover the nature of her cardiac affection. On her reappearance in three weeks time her face and lips showed that she had gained much blood, and that her general health had greatly improved; but on examining her heart at its base, to my intense surprise, I heard the murmurs louder than they were before, and much more marked in every respect. Her pulse was fairly good and quite regular. She still complained of palpitation on exertion, and her dyspnœa was little, if anything better; also the noises in her head and chest distressed her very much. On placing the stethoscope over the base of the heart, to the left side of the sternum, in the region of the second intercostal space, two loud murmurs were heard. The first murmur, which was very loud and blowing with a decided thrill in it, accompanied the systole of the heart, and at the same time a strong heaving impulse was communicated to the stethoscope. Just before this murmur ceased a distinct "click" was heard, and then immediately a second murmur, but of a softer nature and of shorter duration than the first murmur, was heard. On moving the stethoscope to the aortic area, the murmurs were still very distinctly heard, but the click which, as I have said, joined the two murmurs together was heard much more clearly, and I believe indicated the quick and sudden closure of the aortic valve. How the murmurs themselves were produced I could not at this time venture to say. They were heard also at the apex of the heart, but not nearly so loud as at the spot already stated. *The point of maximum intensity of both murmurs was to the left of the sternum between the second and third ribs.*

Upon entering into the history of my patient, I learned that about six years previously she had an attack of scarlet fever, but she could not say that her health in any way was worse after the attack. There was no history of rheumatic affection. I advised my patient to give up all unnecessary exertion, and to rest as much as possible, and to continue taking the iron and arsenic for another month.

At the end of a month I again saw her. She was looking greatly better. Her face and lips showed that her anæmia had quite disappeared. She still had great breathlessness on exertion, and complained much of the noises in her head and chest.

On listening over the base of the heart to the left of the sternum, in the second intercostal space, a strong heaving impulse was communicated to the stethoscope with the systole of the heart, and both murmurs, as already described, were heard with extraordinary clearness—I never heard anything like those murmurs before or since. At the apex of the heart the murmurs were not so loud as at the spot indicated; and in the aortic area, while the click joining the two murmurs was very distinct, the murmurs themselves were but slightly diminished in intensity.

Being very much puzzled as to the cause of these murmurs, which, be it borne in mind, were much louder and better marked since the girl's anæmia had disappeared, I thought it would be interesting to hear what Dr George Balfour had to say as to the cause of the murmurs. After a careful examination he came to the conclusion that the case was one of patent ductus arteriosus, but at the same time confessed that his diagnosis was founded upon hypothetical rather than well-known scientific data. As regards treatment of the case, Dr Balfour advised that she should continue to take iron and arsenic, and should rest as much as possible.

From time to time I visited my patient at her own home, as she was unable to come to my house. At this time my friend Dr Wyllie saw her with me. He also kindly took me to see a case in the Infirmary which was of great interest to the physicians. The case was believed to be one of patent ductus arteriosus. I had an opportunity of examining this girl immediately after seeing my own patient. On auscultation in the second left intercostal space two loud murmurs were heard very like those described as existing in my own case, but both murmurs seemed coarser and rougher, and the girl herself had a very healthy, even ruddy appearance.

The summer being at hand, my patient went into the country for change of air, and I did not see her for two or three months, but I heard from a medical friend that he had been called to treat my patient for hæmoptysis and bleeding at the nose. From this time her health began to fall off greatly; she suffered much from cough. Her feet were occasionally swollen, and she became very anæmic.

I heard from the girl's mother frequently to this effect,—that my patient suffered greatly from breathlessness and cough, and that she often coughed up some blood, and had had several attacks of bleeding at the nose, and was now extremely pale and weak. As she was rapidly getting worse, I advised her return to Edinburgh so as to be under my care.

She returned to Edinburgh on the afternoon of the 31st August, and I saw her at 8.30 P.M. She was then sitting up in a chair by the fireside looking extremely pale and ill. What struck me at once was the quickness of her breathing. Her pulse was 120, and respirations about 54 per minute. On examining the chest there were crackling, moist sounds on both sides in front and behind; there was constant cough, with some frothy and bloody expectoration. The veins in the neck were much distended. She could not lie down, but was kept in bed propped up with pillows. On placing the stethoscope over the base of the heart on the second intercostal space, a very strong heaving impulse was communicated to the instrument, but, to my great surprise, both loud murmurs had almost entirely disappeared. The heart was violently wobbling about and striking against a large area of the chest wall, and occasionally I heard two sounds which I can best describe by the words "filupp," "flupp," pronounced quickly. How these sounds were produced I could not then say, but I came to the conclusion that all the cavities of the heart were extremely overgorged and in a state of tension.

The pallid face and bloodless and bluish lips showed that she was extremely anæmic and somewhat cyanotic. Day by day she lost more blood in the frothy expectoration. Her urine, which was very scanty, contained one-fifth albumen. She was at times delirious. She was not allowed to take any food but milk and water with white of egg. For some time she showed a decided improvement, but the distressing cough, with bloody expectoration, never left her. Some days better, some days worse, she lingered on until about the 20th September, when she began to complain of sharp cutting pain in the region of her heart; and on stethoscopic examination a loud, continuous, rough friction sound was heard all over the cardiac area. Pericarditis had evidently set in. After her return from the country I did not again hear the remarkable murmurs. They had entirely disappeared; but it was often possible to hear the "filupp," "flupp" sounds during the violently wobbling action of the heart. She died on the 25th September, thoroughly worn out and exhausted, 22 years of age.

Such is the very imperfect history of this case so far, but I am indebted to my friend Dr Wyllie for the following notes taken at his dictation at the post-mortem examination performed on the 27th September 1882:—

Description of Body.—The body was 5 ft. 1¼ inches in length. Circumference of body just below the level of the mammæ was 27¾ inches. The body was delicately formed, rather emaciated. Mammæ rather small. There were evidences of commencing putrefaction, abdomen being distended and tympanitic. Skin over the abdominal region being greenish blue in tint. The same tint of skin was seen on the throat. Rigor mortis still slightly present in the legs, but absent in neck and upper extremities. The legs below the knees were somewhat œdematous, pitting on pressure being best marked above the ankles.

On proceeding to examine the chest, the skin over the costal parietes was first reflected before the thoracic or abdominal cavities were opened into. The chest wall was then transfixed with four long barbed crotchet needles at the following points:—

Needle No. 1 was driven into the second left intercostal space, exactly at middle distance between the two cartilages, at a spot one inch to the left of the sternal margin.

Needle No. 2 was inserted in the same intercostal space exactly between the two ribs, but at the distance of ½ inch from the left margin of the sternum.

Needle No. 3 was inserted into the third left intercostal space, exactly at mid distance between the third and fourth ribs, at a spot ½ inch from the left margin of the sternum.

Needle No. 4 was inserted in the second *right* intercostal space, mid way between the ribs, at a spot ½ inch from the right margin of the sternum.

These needles, being thus fixed in position, were driven deeply inwards in a vertical direction, and the costal cartilages were divided in the usual way on each side, and the sternum with the attached cartilages and soft parts was removed. The needles, being fixed by their barbed points to the cardiac tissues, were left attached to the heart after the sternum had been removed.

On thus removing the sternum the needles which had been inserted to the left side of the sternal bone were all found to enter directly into the anterior surface of the pericardial sac without piercing the margin of the left lung, which lay close, ¼ inch, to the outer side of needle No. 1. On the other hand, the needle No. 4, which was inserted half an inch to the right of the sternum in the second intercostal space, transfixed the margin of the right lung in its upper lobe ¾ inch to the right of its free edge. Having thus transfixed the lung, this needle passed into the surface of the pericardium close to the right margin of the sac.

The *pericardium* was next opened. The sac was found to contain about ½ pint of blood-stained serum, and the serous membrane, parietal and visceral, was found to be coated with a delicate villous layer of soft and recent lymph, which extended in patches over the whole surface of the heart and its containing sac.

The following was now found to be the positions of the needles:—

Needle No. 1 pierced the anterior surface of the pulmonary artery about its middle, and at a spot about ¼ inch above its valve.

Needle No. 2 transfixed the *aorta* immediately above its valve, passing immediately to the right of the pulmonary artery before piercing the aorta.

Needle No. 3 pierced the conus arteriosus 1 inch below the pulmonary valve, and at a spot ¼ inch to the right of the middle line of the conus arteriosus, and then passed backwards through the interventricular septum, and transfixed the left ventricle about an inch below the aortic valve.

Needle No. 4 passed through the pericardial sac at its outer limit, and merely transfixed a portion of the right wall of the heart without entering its chambers.

The Heart as a whole was much enlarged, measuring in length from pulmonary valve to apex 4¾ inches; and when flattened out, it measured in breadth across its middle 4½ inches. Its muscular substance was a good deal softened by putrefaction. There was evident hypertrophy of both ventricles, the left wall measuring ⅝ inch in thickness, and the right wall measuring ⅜ inch in thickness. The ventricular cavities were both considerably dilated. The auricles were not pierced by any of the needles. The left auricle was only slightly dilated, and its appendix was empty and flaccid, being in position behind and to the left of the pulmonary artery, and quite overshadowed by the aneurism on the pulmonary artery to be presently described. The appendix of the left auricle as a whole was large enough to contain easily the point of the forefinger, but the cavities of its fringe-like margins were not large enough to permit the entrance of the little finger point. The right auricle was considerably dilated, except as regards its appendix, which was of natural size.

The Lungs.—The right lung, especially at its upper lobe, contained a number of old and indurated infarctions of a grayish red colour. Both lungs were greatly congested and œdematous, with a feeling of partial consolidation, probably the result of catarrhal pneumonia.

The Liver was natural.

Spleen was greatly enlarged, measuring 8 inches in length by 4½ in breadth.

The Kidneys were much congested and enlarged, and were softened by putrefaction; otherwise they were natural.

The heart, pericardium, and great vessels, were now removed and carefully dissected, without severing the connexion of the heart and its great vessels.

The following was found to be the condition of the great vessels:—

The Conus Arteriosus was very considerably dilated. When the pericardium was first opened its anterior surface was found bulging forward with unnatural prominence.

The Pulmonary Artery measured from the base of its valvular cusps to its bifurcation, 2⅜ inches. At the bifurcation the ductus arteriosus communication with the aorta was patent; the orifice of communication being large enough to admit freely a goose quill.

The Ductus Arteriosus was represented by a very short vascular trunk about ⅛ inch in length. When viewed externally its narrowest diameter appeared to be about ¼ inch. At its aortic attachment there was a bulging of the aortic wall, which corresponded with the funnel shaped opening of the ductus arteriosus on the inner wall of the aorta.

The Pulmonary Artery, as a whole, was found to be dilated to at least twice its natural size, but this dilatation was not uniform in all directions, for whilst the posterior, right lateral, and anterior walls presented no special bulging or marked irregularity of outline, the left lateral wall from the ductus arteriosus close down to situation of the pulmonary valve was bulged in an outward direction towards the left, and at the lower limit, where the bulging was greatest, a regular aneurismal sac was formed about the size of a large walnut. This sac was contained within the pericardium, and, as already said, lay in front of the left auricular appendix, which it entirely hid from view.

The needle No. 1 transfixed the middle of the pulmonary artery, about ¾ inch to the right of the aneurismal sac. The sac was filled internally with pretty firm coagulum, and from the sac this coagulum extended along the surface of the left anterior wall of the artery to near its bifurcation, being bound to this wall by pretty firm adhesion. A conical prolongation of this clot partially blocked the lumen of the ductus arteriosus. Externally, the part of the sac which was contained within the pericardium was covered with abundant inflammatory lymph of older date than the lymph effused on the pericardial surface generally. This lymph was deeply stained with blood colouring matter, and formed firm adhesions between the aneurismal sac and the parietal layer of the pericardium.

The primary divisions of the pulmonary artery were both of large size, the right being at least nearly twice as large as usual. Into the left division there projected for about half an inch an offshoot of the coagulum above described as existing in the main trunk of the pulmonary artery. This, however, occupied only about one-fourth or one-sixth of the lumen of the vessel.

THE VALVES OF THE HEART.

The Pulmonary Valve was extensively diseased. Each cusp on its ventricular surface was covered with ragged vegetations, attached for the most part to the neighbourhood of the corpus Arantii and to the margin and upper half of the cusp. These vegetations were of soft granular consistence, and appeared to be made up in part of true vegetative growths and in part of secondary fibrinous deposit. The anterior cusp was the least diseased, retaining its full size, but presenting a large amount of vegetations in the neighbourhood of the corpus Arantii. The two posterior cusps, right and left, were both reduced to about half their natural dimensions by ulceration or atrophic change, and were fringed along the whole length of their free margins with large and ragged vegetations of soft consistence. The ragged and vegetating edges of these two cusps were both turned over so as to hang as it were dependent towards the ventricular cavity, and in the case of the anterior cusp it was evident from the dipping of its free margin that there had been a tendency to a similar state of matters.

The circumference of the pulmonary orifice at the level of its cusps was 3½ inches.

The Aortic Valve.—The orifice of the aorta was about natural in size. All the cusps of the aortic valve, however, presented on their ventricular surface vegetations attached to the corpora Arantii. In the case of the anterior cusp the group of vegetations formed a mass the size of a small pea. On the other cusps the vegetations were much more minute, being about the size of small pin heads. The cusps otherwise retained their natural size and structure.

The Mitral Valve.—The anterior or aortic cusp was well developed, and was natural, except that on its auricular surface, close to its free margin, it presented an attached mass of dense vegetation about the size of a small bean.

The Aorta was of natural size, both in its arch and descending portion. At the junction of the second and third portions of the arch, external to the line of the left subclavian artery, was the patent opening of the ductus arteriosus already referred to. The margins of the opening were smooth, and the wall of the aorta at the point of junction with the ductus arteriosus was distended somewhat in a funnel-like manner. The lumen of the ductus arteriosus was large enough to transmit a goose quill, and was partly plugged by a protruding offshoot of the coagulum from the pulmonary artery, as already said. On the posterior wall of the aorta, *exactly opposite the orifice of the patent ductus arteriosus*, there was a rounded bulging or lens-shaped concavity in the aortic wall, which measured one inch in diameter, and in depth about half an inch. The cavity thus formed was partly filled up with adherent coagulum, and the limiting wall of the cavity was here hardened as if by atheromatous changes.

The Mitral Orifice was slightly dilated.

The Tricuspid Orifice was almost natural in size, and its cusps were quite normal.

The Foramen Ovale was quite closed.

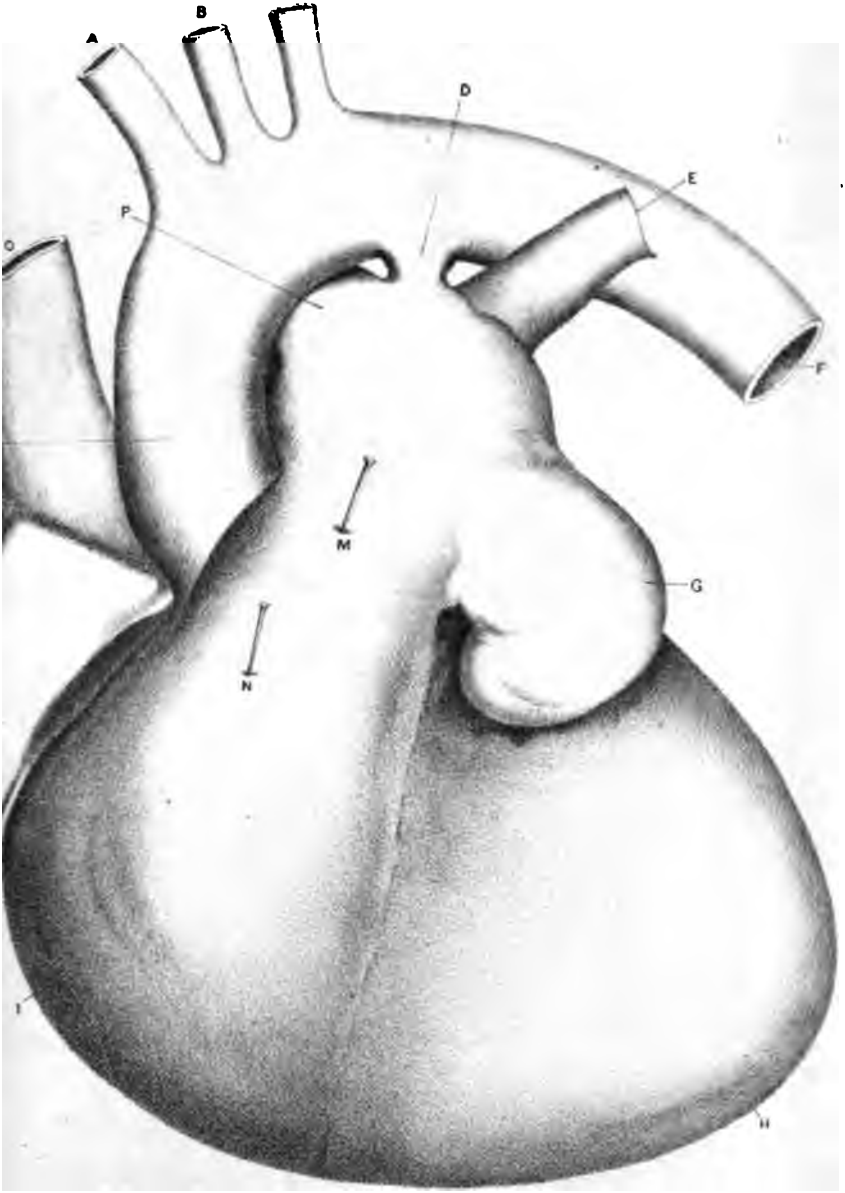
The same letters when present in both Plates point to the same parts.

PLATE I.

FIG. 1.—Shows the heart with its large bloodvessels. All the cavities of the heart and the large bloodvessels were stuffed with wet cotton wool, so as to distend them. In this way the dilated right ventricle, conus arteriosus, and pulmonary artery are well shown. The descending portion of the aorta has been raised up from its normal position, so as to bring more clearly into view the ductus arteriosus.

A, The innominate artery.
B, Left carotid artery.
C, Left subclavian artery.
D, The patent ductus arteriosus.
E, Left branch of the pulmonary artery.
F, Descending portion of the aorta.
G, Saccular aneurism, filled with granular clot, on the left anterior wall of the pulmonary artery.
H, Dilated left ventricle.
I, Dilated right ventricle.
K, Right auricle.
L, Ascending aorta.
M, This letter is placed below the needle No. 1, which was inserted into the second left intercostal space, midway between the ribs, at a spot 1 inch to the left of the sternal margin. It pierced the pulmonary artery at its middle, about ¼ inch above its valve.
N, This letter is placed below the needle No. 3, which was inserted into the third left intercostal space, midway between the ribs, at a spot ½ inch to the left of the sternal margin. It pierced the dilated conus arteriosus ¼ inch to the right of the middle line, and 1 inch below the pulmonary valve.

Fig I



FigII

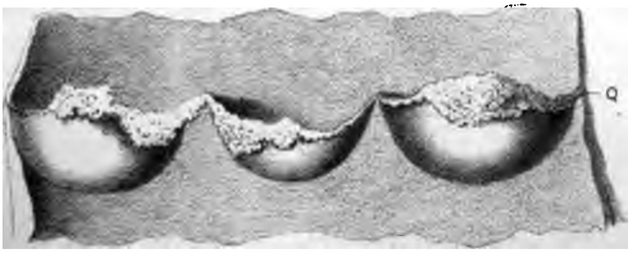
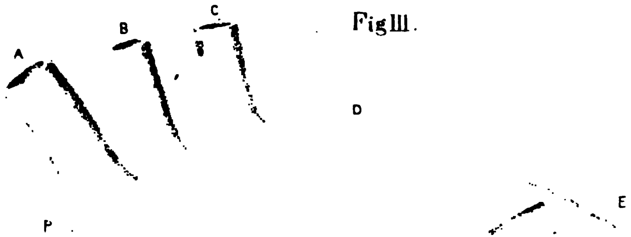


Fig III.



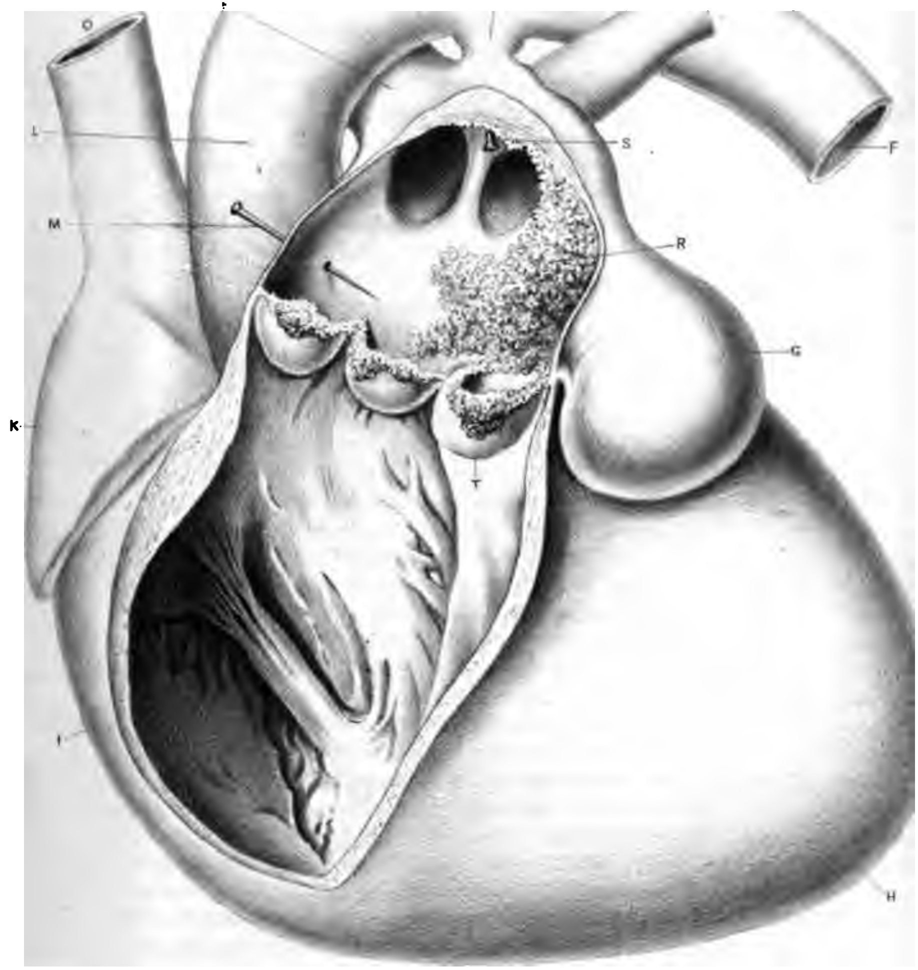
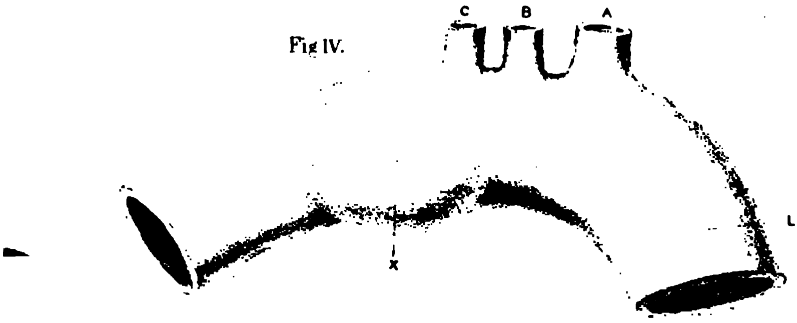


Fig IV.



O, Superior vena cava.
P, Right branch of pulmonary artery.

FIG. 2.—The diseased cusps of the pulmonary valve.
Q points to the anterior cusp of the valve.

PLATE II.

FIG. 3.—Shows the heart so dissected as to present to view the right ventricle, conus arteriosus, and pulmonary artery as one tube. A portion of the wall of the right ventricle, conus arteriosus, and pulmonary artery has been removed.
R points to the granular clot filling the saccular aneurism (G) on the left anterior wall of the pulmonary artery. A conical prolongation of this clot was found plugging the ductus arteriosus, and another prolongation of the clot was found partially obstructing the left branch of the pulmonary artery.
S points to a large pin which was inserted into the lumen of the patent ductus arteriosus.
T points to the anterior cusp of the pulmonary valve.

FIG. 4.—Shows a portion of the ascending, transverse, and descending aorta, seen from behind.
× A distinct aneurismal bulging out, situated on the posterior wall of the aorta, just external to the line of the left subclavian artery, and immediately opposite to the aortic opening of the ductus arteriosus.

After hearing this description of the post-mortem examination, the first question which naturally suggests itself is, How were the murmurs which I have described produced? But before attempting to answer this question, let us shortly recapitulate the lesions which were found at the post-mortem examination in the heart and great bloodvessels. Let us look at these lesions following the course of the circulation of the blood.

The right auricle was greatly dilated. The tricuspid orifice was very slightly dilated, but as far as could be seen the tricuspid valve was competent. The right ventricle was much dilated and its wall thinned. The conus arteriosus was greatly dilated and its wall thinned. The pulmonary valve was very extensively diseased in its three cusps, each cusp being atrophied and shrunken, and covered over with granular vegetations on its ventricular side. The pulmonary artery itself was greatly dilated, and its left anterior wall converted into a saccular aneurism the size of a walnut, which was filled with granular clot. The ductus arteriosus once patent, allowing a goose quill to pass through it, was now partly plugged with clot. The left auricle was almost natural. The mitral valve was natural, except that its anterior cusp on the *auricular* surface presented a mass of vegetation the size of a small bean. The left ventricle was much dilated and the wall hypertrophied. The aortic valve was competent, but on its ventricular surface the anterior cusp presented a mass of dense vegetation the size of a small pea, while on the other cusps were small vegetations the size of pin heads.

Let us also remember that the needle No. 1, which was driven into the second left intercostal space at a spot one inch to the left of the sternal margin, pierced the pulmonary artery in its middle, just about ¼ inch above the diseased pulmonary valve, and that on stethoscopic examination of the heart, the murmurs referred to were heard with greatest intensity at this very spot.

Now, during the simultaneous contraction of the two ventricles, blood driven through the aortic valve and through the pulmonary valve would come in contact with cusps whose margins were rough with dendritic vegetations. In the case of the aortic valve it is certainly doubtful if a murmur was produced there, but in the case of the pulmonary valve, where the cusps were so extensively diseased, each cusp being shrunken and covered over on its ventricular surface with masses of vegetations, there can be little doubt, I think, that a loud murmur was produced at that situation. If any murmur was produced at the aortic valve, I doubt if it was possible to hear it in the presence of the much louder murmur at the pulmonary valve. A careful examination of the aortic valve showed that it was competent, and that the pea-sized vegetation on the ventricular side of its anterior cusp would offer very little obstruction to the flow of blood through the valve. Hence I doubt if any murmur was produced at the aortic valve.

With regard to the mitral orifice,—if any murmur was produced there during the systole of the heart, it must have been a very feeble one, which could not be distinguished in the presence of the loud murmur at the pulmonary valve. The first loud murmur heard with such remarkable clearness in the pulmonary area could be very clearly heard at the apex of the heart.

I have already said that at the end of the first loud blowing and thrilling murmur a distinct click was heard. This click was clearly heard over the aortic area, and I believe was caused by the sudden closure of the aortic valve under great pressure. Did the blood rushing through the patent ductus arteriosus during the heart's systole contribute anything towards the first loud and thrilling murmur? The ductus arteriosus is situated much deeper in the chest than the valve of the pulmonary artery, but it is likely that any murmur produced at that patent orifice would be most clearly heard at the spot where the pulmonary artery is nearest to the chest wall, *i.e.*, in the second intercostal space to the left of the sternal margin. It appears to me quite impossible that such a volume of blood as would be driven by the contraction of the right ventricle through the patent ductus arteriosus could pass through that orifice without distending it, and causing its margins to vibrate. That the blood was being driven through the patent ductus arteriosus with much force up to within three weeks of the girl's death was evident from the fact that there existed on the posterior wall of the aorta, just external to the left subclavian artery, an aneurismal dilatation or bulging out of that wall, which could have been only caused by a column of blood driven with much force against the wall in that situation; and this bulging out of the posterior wall of the aorta was exactly opposite the aortic orifice of the patent ductus arteriosus. The ductus arteriosus in the fœtus is as large as the pulmonary artery itself, and I don't suppose that a murmur is produced by blood rushing through it during the fœtal circulation; but when it is reduced to a tube which just admits a goose quill, and has a powerful right ventricle behind it, the quantity of blood which is driven through it must distend it and give rise to a vibratory or thrilling murmur at its margins.

With regard to the second murmur, which I have described as beginning immediately after the closure of the aortic valve, we have to look to the tricuspid orifice, to the mitral orifice, and to the ductus arteriosus for the explanation of its production. Bearing in mind that the tricuspid orifice was healthy, and its valve competent, and that the aortic valve was competent, little or no regurgitation could take place through those valves. Now, when the two ventricles contracted the blood driven by the hypertrophied left ventricle would be sent with much force into the aorta, and at the same time, by the contraction of the right ventricle, a considerable quantity of blood would be driven through the patent ductus arteriosus, also into the aorta, and as a result that vessel would be greatly distended. According to the well-known law, it would recoil with the same force with which it had been distended. The aortic valve being competent, a certain quantity of blood would be driven back with much force into the pulmonary artery during the recoil of the aorta; and supposing the pulmonary valve was competent, a great distending force would be exerted, according to Pascal's law, upon the inner wall of the pulmonary artery and on the pulmonary valve; and if this valve was incompetent, then the distending force would be exerted on the inner wall of the conus arteriosus and of the right ventricle, as well as upon the inner wall of the pulmonary artery.

It appears to me that the aneurismal sac on the pulmonary artery was produced in one of the two following ways:—Either the recoil current through the ductus arteriosus, by distending the pulmonary artery in all directions, gradually caused that vessel to dilate and to give way at one part, say its weakest part, until it was bulged out in the form of a sac, or the recoil current impinging directly on one part of the wall of the pulmonary artery with much force, gradually bulged out that part until the aneurismal sac was produced. It is interesting to note that if the axis of the lumen of the ductus arteriosus was prolonged, at one end it would strike the middle of the saccular aneurism on the pulmonary artery, and at the other end would strike the middle of the aneurismal dilatation on the posterior wall of the aorta, which I have described. From which observation it is only fair to conclude that both these aneurismal dilatations were produced in the same way, namely, by the distending force of the to and fro current, driven through the patent ductus arteriosus, acting on the vessels at the spots where the aneurisms were produced. There can be no doubt that as a result of the diseased state and incompetency of the pulmonary valve, a very great distending force must have been exerted upon the pulmonary artery, the conus arteriosus, and the right ventricle at one and the same time—all these structures, as one tube, being greatly dilated.

From the fact that the left auricle was very slightly dilated, it is only fair to conclude that there was very little obstruction, if any, to the flow of blood through the mitral orifice during the auricular systole; and although a good-sized vegetation was found on the auricular surface of the aortic cusp of the mitral valve, it was quite evident that there was no obstruction to the flow of blood through the valve, as the auriculo-ventricular orifice was dilated rather than constricted. I believe, therefore, that no murmur whatever was produced at the mitral orifice during the auricular contraction. We have then only the pulmonary artery and the patent ductus arteriosus to account for the production of the second murmur. As the result of careful observation, it was noted that the second murmur began immediately after the closure of the aortic valve, and was heard most distinctly in the second intercostal space to the left of the sternal margin. Was it produced by the blood rushing back through the ductus arteriosus during the powerful recoil of the aorta, or was it produced by regurgitation of blood through the diseased pulmonary valve? It was quite evident from a careful examination of the axis of the tube of the ductus arteriosus, and of the situation of the pulmonary valve, that the recoil current through the ductus arteriosus would impinge not on the cusps of that valve, but on a spot at least an inch away from them, outwardly towards the left, that spot being the centre of the saccular aneurism on the pulmonary artery. The rush of blood back through the patent ductus arteriosus mixing with the blood in the distended pulmonary artery, conus arteriosus, and right ventricle, would set up a commotion in that fluid, but I fail to see how the cusps of the diseased pulmonary valve could be set into a state of vibration sufficient to cause a murmur by the recoil current which would strike, not on them, but on the dilated wall of the pulmonary artery, fully an inch above them. It must be also borne in mind that the pulmonary artery at the situation of its valvular cusps was greatly dilated, its circumference being at this spot 3½ inches. The incompetency of this valve was therefore marked in the highest degree. The post-mortem examination also showed that its cusps were much shrunken and atrophied, and that their ragged margins hung dependent into the ventricular cavity. These ragged edges would undoubtedly be thrown forward and caused to vibrate by the large volume of blood from the right ventricle rushing past them during the systole, after the closure of the right auriculo-ventricular valve. The fluid contents of the large right ventricle would have to be *squeezed* through the comparatively narrow gate of the pulmonary valve, and the ragged margins of that gate would vibrate in consequence. But it appears to me the case is quite different when we come to consider what took place during the rush of blood back through the ductus arteriosus. Granting that this recoil current did strike on the cusps of the pulmonary valve, in consequence of the *smallness* of its volume as compared with the great incompetency of the pulmonary valve, there would be very little obstruction to its regurgitant flow into the right ventricle. I therefore think that whatever regurgitant murmur was produced at the seat of the pulmonary valve was, comparatively speaking, nothing in the presence of the loud murmur produced at the orifice of the ductus arteriosus during the recoil of the aorta.

It is quite clear that a large quantity of blood could not possibly be pumped back through the patent ductus arteriosus without causing that tube to dilate, and as a result the blood rushing past the distended margins of the tube would set up a vibration of these margins and thus give rise to a murmur.

I have therefore come to the conclusion that the first murmur really consisted of two murmurs, the one being produced by the rush of blood past the diseased cusps of the pulmonary valve, and the other being produced by the blood rushing through the distended ductus arteriosus, both together constituting the loud blowing and thrilling murmur which accompanied the systole of the ventricles. The second murmur, I believe, was produced by the blood rushing back through the patent ductus arteriosus during the recoil of the aorta.

It cannot have escaped your recollection that on the return of my patient from the country, on the 31st August 1882, she was in a state of great danger from extreme congestion of the lungs. The whole venous system was greatly engorged, and the urine was loaded with albumen. She had constant cough with frothy and bloody expectoration; she died within a month after her return. An examination of the lungs after death, especially the right lung, showed that for a considerable time previous to her death hæmorrhagic infarcti had been forming in those organs—the right lung throughout a great area being rendered useless in consequence. There can be no doubt that these infarcti had formed as the result of embolic plugging of the terminal branches of the pulmonary artery by little pieces of vegetations detached from the extensively diseased cusps of the pulmonary valve, or by little fragments of coagulum detached from the granular clot filling the aneurism on the pulmonary artery. The post-mortem examination also showed that the ductus arteriosus was almost completely plugged by a conical clot which projected from the clot in the saccular aneurism on the pulmonary artery, and that the large left branch of the pulmonary artery was greatly obstructed by a clot from the same source. Did these conditions exist when my patient returned from the country on the 31st of August, more than three weeks before her death? The history of the case shows that she began to be extremely ill a day or two before her return on the 31st August. When I saw her on that day her dyspnœa was most distressing. The venous system was everywhere terribly engorged; the veins of the neck being greatly distended. The urine contained a very large quantity of albumen, about one-fifth. There was crepitation in all parts of her lungs. She had constant cough with bloody and frothy expectoration; and from this time on to her death there were frequent attacks of hæmoptysis and epistaxis. The heart all the time was heaving against the wall of the chest with a remarkably strong impulse, and, strange to say, the two loud murmurs had entirely disappeared; but during the violently wobbling action of the heart one could hear the two sounds "filupp," "flupp" quite distinctly. Her extremely distressing symptoms evidently began as the result of the plugging of the terminal branches of the pulmonary artery, and as the result of the obstruction in the left branch of the pulmonary artery, and the consequent obstruction to the circulation through the lungs.

How is it possible to account for the disappearance of the two loud murmurs and for the production of the sounds "filupp," "flupp?"

If my explanation of the production of the two loud murmurs is correct, I think their disappearance may be accounted for in the following way:—Bearing in mind that numerous terminal branches of the pulmonary artery in both lungs were plugged, and that one of the main branches of the pulmonary artery itself was greatly obstructed, and that both lungs were in a state of catarrhal pneumonia, and that the kidneys and spleen were greatly congested—the whole forming an impediment to the circulation of blood through the lungs which the distended and dilated right side of the heart could not overcome—it would necessarily follow in consequence of this engorged state of the whole right side of the heart, that too small a quantity of blood would be driven past the cusps of the pulmonary valve to set them in vibratory commotion. Hence the absence of the first part of the loud systolic murmur. But in addition, the almost complete closure of the ductus arteriosus by a conical clot from the aneurism would effectually prevent the passage of a sufficient quantity of blood through that opening during the heart's systole as would cause its margins to vibrate. Hence the disappearance of the second part of the loud systolic murmur. In the same way this plugging of the once patent ductus arteriosus would equally prevent the rush back of blood during the recoil of the aorta. Hence the disappearance of the second loud murmur.

With regard to the production of the sounds "filupp," "flupp," heard over the base of the heart, it was quite evident that the first was caused by the reduplication and accentuation of the first sound of the heart with the systole, and that the second shorter sound was caused by the rapid closure of the aortic valve—the whole arterial vascular system being in a state of great tension due to the block to the circulation in the right side of the heart and in the lungs.

Gentlemen, after hearing this paper so far you will ask, Have we learnt anything, either from the symptoms observed during life or from the post-mortem appearances, which would enable us in the future accurately to diagnose a case of patent ductus arteriosus with aneurism of the pulmonary artery?

The chief facts in connexion with the physical symptoms observed during life which I have brought before you are these:—

On auscultation a loud, blowing, thrilling murmur accompanying the ventricular systole, was heard with maximum intensity in the second left intercostal space, fully an inch to the left of the sternum, and at the same time a strong heaving pulsation was communicated to the stethoscope at this spot. The best anatomical authorities state that the left border of the pulmonary artery lies in the second intercostal space, at a distance of three-fourths of an inch to the left of the margin of the sternum. If we meet with a case in which a set of symptoms, such as those just described, exist, we may fairly conclude that there is a considerable dilatation of the pulmonary artery present. A dilated pulmonary artery alone would not, however, give rise to such an extraordinary murmur as was heard with the ventricular systole in my patient's case. Dilatation of the pulmonary artery above its valve is such a rare thing in a young person, that we must look for some special cause of obstruction *in front* of the dilatation to account for it. In connexion with a dilated pulmonary artery a murmur may or may not be present. Its presence with the ventricular systole will depend on whether the pulmonary valve is diseased or not, or whether there is some obstruction to the flow of blood through the pulmonary artery at a point farther on than the seat of the pulmonary valve. So rare is the existence of a dilated pulmonary artery in a young person that if we find an example of it we may suspect that a patent ductus arteriosus is the cause of it, because such an obstruction in the lungs or in the pulmonary artery itself, apart from a patent ductus arteriosus, as would cause a great dilatation of the pulmonary artery, is almost unknown.

An acquaintance with Pascal's law of the diffusion of pressure in fluids will at once enable us to understand how even a strongly walled pulmonary artery may gradually become dilated into a saccular aneurism, if there is a leak back from the aorta into the pulmonary artery, as exists in the case of a patent ductus arteriosus. The short wide tube of the pulmonary artery above its valve is exposed to a very great extensile pressure by the column of blood escaping back through that patent orifice acting on the fluid contents of that artery. Dilatation once begun, the extensile pressure gradually becomes greater and greater, until the tube is burst or a saccular aneurism is produced. But not only is this pressure exerted in the inner wall of the pulmonary artery, but the cusps of the pulmonary valve are exposed to similar pressure. Sooner or later they give way, and become diseased and incompetent.

There can be no doubt, then, that by far the commonest cause of an aneurismal dilatation of the pulmonary artery is the existence of a patent ductus arteriosus. When this exists, a loud thrilling murmur will be heard accompanying the ventricular systole caused by the rush of blood through that orifice into the aorta, and in the same way after the closure of the aortic valve, another murmur would be caused by the rush of blood back through that orifice during the recoil of the aorta, and this rush back current is the one which gradually causes the dilatation of the pulmonary artery.

If, then, we meet with a case in which there is no history of lung disease such as would cause obstruction to the flow of the circulation through the lungs, and if on auscultation in the second left intercostal space we find there is a heaving pulsation communicated to the stethoscope with the ventricular systole, and at the same time a loud thrilling murmur is heard with maximum intensity at this very spot, and also heard in lines radiating upwards and outwards from this spot, and if this murmur is followed by another, similar in character, immediately following the closure of the aortic valve, we may fairly conclude that the cause of the aneurismal dilatation of the pulmonary artery, and of the two thrilling murmurs, is a patent ductus arteriosus.

These murmurs and the dilatation of the pulmonary artery may exist without any co-existing disease of the pulmonary valve. In fact, I should think that freedom from disease and competency of that valve was a necessary condition for the production of any marked aneurismal dilatation of the pulmonary artery itself. No doubt the valve must sooner or later become incompetent, and then the whole right side of the heart becomes subjected to great extensile pressure, and dilatation results, as was so well observed in the right heart of my patient.

I do not believe that the attack of scarlet fever from which my patient suffered six or seven years before she came to consult me had in any way affected the right side of her heart. She was able to do hard work, even to dance, up to within a comparatively short time before I first saw her. We know that even a slight cold in such a case would be sufficient to throw much pressure on the pulmonary valve, and my belief is that her pulmonary valve began to give way, and became crumpled and diseased as soon as embolic plugging of the terminal branches of the pulmonary artery took place.

From a careful examination of the aneurism and of the pulmonary valve, I think there can be no doubt that the former existed a long time before the latter began to be diseased and incompetent, and it was only when the latter became so that the distressing symptoms commenced which ultimately carried off my patient.

The mere presence of a patent ductus arteriosus and the consequent intermingling of venous and arterial blood does not seem to act very injuriously on the health of the patient. In my patient's case there was very little cyanosis at the first, and all her distressing symptoms resulted from the extreme dilatation of the whole right side of the heart, and the obstruction to the flow of blood through the lungs.

With regard to the literature of this subject there is very little to quote from or refer to. As far as I have been able to ascertain, there is no case recorded in this country in which a post-mortem examination has brought to light the pathological conditions which have been described in this paper.

In the *Glasgow Medical Journal* for 1879, Dr Wood Smith of Glasgow has a short paper, with a woodcut, on "A Probable Case of Aneurism of the Pulmonary Artery and Ductus Arteriosus," but the case was by no means clearly made out. The patient is still alive and in good health. In vol. xvii., *Archiv der Heilkunde*, Dr Lüttich has a case entitled "Fall von Aneurysma des Ductus Bottali und Thrombose der Aorta," and in Rokitansky's *Krankheiten der Arterien* there are several illustrations of cases of patent ductus arteriosus, but none of them resemble the case I have brought before you this evening.

I cannot close this paper without expressing my deep gratitude to Dr Wyllie for the careful manner in which he performed the post-mortem examination in this case, and for his accurate description of the pathological conditions found in connexion with the heart and large bloodvessels, and I am the first to admit that the value of this paper consists in the scientific accuracy of his descriptions.

VI.—TONSILLAR DISEASE IN CHILDREN.

By James Carmichael, M.D., Physician to the Royal Edinburgh Hospital for Sick Children.

(*Read before the Medico-Chirurgical Society of Edinburgh, 4th June 1884.*)

The frequent liability of children to affections of the tonsils is universally recognised. Disease of these glands is too often considered of minor importance, yet if we carefully watch the sequence of events in many cases, such conditions are apt seriously to affect the general health, and often form the starting-point of other and more serious ailments. There can be no doubt that we are sometimes apt to underestimate the importance, if not at times overlook, the slighter forms of tonsillar disease in young children. Nothing alarms such patients more than an examination of the throat, and we are apt to be deterred from pursuing our investigations in this direction if there be no special symptoms leading us to suspect the presence of disease. In no class of cases is a thorough and complete examination of the patient more necessary than in children, and, in carrying this out, we should never neglect to look carefully at the fauces. Tonsillar diseases may be conveniently classified into acute or chronic varieties, and these in their turn may be primary or secondary. The accompanying table shows in a nosological form the various affections of the tonsils to which children are liable, and may assist us in our consideration of the subject.

- I. *Primary.*
  - *Simple Inflammatory.*—1. Simple or superficial catarrh.
    - 2. Follicular catarrh.
    - 3. Parenchymatous tonsillitis, including tonsillar abscess.
  - *Complicated.*—1. Croupous.
    - 2. Diphtheritic.
    - 3. Ulcerous.
    - 4. Aphthous.
    - 5. Parasitic.
    - 6. Syphilitic.
    - 7. Tubercular.
    - 8. Irritant or toxic. (Ingesta poisons.)
- II. *Secondary or Symptomatic.*—Accompanying acute exanthemata and other diseases, such as scarlatina, variola, diphtheria, measles, typhus, pneumonia, dentition and dental caries, stomatitis, gastric catarrh.
- III. Hypertrophy of tonsils.

I purpose in this paper to allude to a few of the more important of these varieties. In studying the diseased conditions of the tonsils it is necessary to remember their anatomical relations and structure. Lying between the pillars of the fauces on each side, they are barely visible in health when examining the throat. On the free surface of each gland are from ten to sixteen round or linear openings, leading into lacunæ or sinuses, which are lined with epithelial covering similar to that on the external surface. The gland substance consists essentially of reticulated connective tissue and lymph follicles, and is plentifully supplied with capillary bloodvessels, as well as lymphatics. These lymphatic vessels, embedded in the inter-follicular tissue, are very numerous, and communicate with several glands, generally termed tonsillar, lying at the angle of the jaw. In all affections of the tonsils they are liable to enlargement, and irritation may be set up in the other cervical glands.

In delicate or strumous children particularly, the glands are apt to become hyperplastic, and remain chronically enlarged, sometimes giving rise to abscesses. If inflammation does not occur, the glands may become caseous or tubercular, and the child then runs all the risks of general infection. In children it is now commonly admitted that you seldom have long-continued irritation of any mucous surface without implication, to a greater or less extent, of the lymphatic glands connected with the vessels supplying the part. We know in bronchial affections this is not unfrequent, likewise in gastro-intestinal disorders.

The simplest form of disease of the tonsils is *Superficial Catarrh*, characterized by slight redness of the surface of the glands, accompanied by increased secretion. This may be all that is noticed, no further development of the disease taking place. When, however, the catarrhal condition becomes more severe, redness of the surface is not only present, but also swelling of the mucous and submucous tissue, with extension of the catarrhal process into the follicles, this latter development being characterized by the appearance of small white points of secretion at the lacunar openings, denoting the true *follicular tonsillitis*, a disease which is met with in varying degrees of severity, accompanied by a corresponding amount of constitutional disturbance. The condition is readily recognised from the characteristic appearance of the tonsil. A complication is frequently met with in severe cases, more particularly in the symptomatic forms, characterized by an excessive amount of follicular secretion, accompanied by more or less croupous exudation on the surface. The spots of secretion at the openings of the follicles appear to become confluent from croupous exudation thrown out on the surface of the tonsil, giving rise to yellowish-white patches, often covering large portions of the surface of the gland. This condition is interesting from a diagnostic point of view, as in the early stages it is apt, and, I believe, sometimes is, confounded with diphtheritic disease. The differential diagnosis can be made by a consideration of the constitutional condition of the patient, as well as the local appearances. Clinically we find in croupous tonsillitis the gland is of a pale red colour, and the patch yellowish-white, confined to the tonsil, and easily separable, leaving the mucous membrane denuded of its epithelial covering, but otherwise intact. In examining the exudation in these cases microscopically, in addition to the cellular elements of the follicular catarrhal exudation, we find blood corpuscles embedded along with the other cells in a fibrinous matrix. In diphtheria, on the other hand, the gland as well as the whole of the fauces is of a dark angry red tint, the patch is of a grayish or grayish-white colour, and cannot be scraped off without leaving a bleeding surface. The disease is not necessarily confined to the tonsil, but may extend to the whole of the fauces, and into the posterior nares, or over the epiglottis and into the larynx and trachea.

Zeigler[1] describes the *croupous exudation* "as a pale yellowish membrane, consisting of fibrinous filaments and granules beset with pus corpuscles," the cellular elements embedded in the matrix undergoing what he calls "coagulative necrosis." This membrane is very loosely adherent to the surface, and can be readily scraped off. The essence of the process appears to consist in abundant extravasation of liquid and cellular material, and "the absence of such agencies as hinder coagulation." The *diphtheritic process* he describes as one in which the "epithelium is not shed, but dies without desquamation, abundant liquid being at the same time poured out, which fills the cells, and gives rise to a condition of rigidity akin to coagulation." The exudation is rich in albumen. He describes a superficial variety of the disease in which the changes only involve the mucous surface proper, and says that what he calls this superficial diphtheria and the croupous exudations present many similarities, and are apt to be confounded together. In *parenchymatous diphtheria* a much greater extent of tissue is involved—not merely the epithelial surface, but also the underlying connective tissue. In both cases you have necrosis of the affected tissues, and a line of cellular infiltration separating the dead from the living. Hæmorrhages are not uncommon, and coagula in the lymphatics. These exudations are generally loaded with lower vegetable organisms. The pathological distinction between these croupous and diphtheritic affections of mucous surfaces is one of great interest, some observers believing in their identity, and others that each has, in the great majority of cases, its own well-defined pathological characteristics. Clinically I think we may, as a rule, make a distinction, although in exceptional instances it is difficult to draw a "hard and fast" line. Certain it is, that you have a simple form of patch confined to the tonsils alone, and clearing off within a few days or a week. On the other hand, you meet with cases where the patches are more adherent, and tend to spread over the adjacent mucous surfaces, the disease taking several weeks to run its course.

Professor Henoch[2] differentiates clinically between the simple forms of sore throat with exudation and the diphtheritic throat. He says "certain anginas present a similarity to diphtheria. On the second day of the disease round yellowish-white patches, the size of a pin's head or larger, appear upon the tonsil; occasionally they are isolated, but often confluent, so that the tonsil appears covered with an irregular whitish-yellow mass, which looks suspicious, but usually, he says, these patches leave no doubt of their benign nature, they are composed of purulent material secreted from the follicles, are loosely adherent, and easily detached. The yellowish colour of the patch is different from the gray or white colour of diphtheritic exudation. Cases occur not unfrequently in which judgment must be delayed for from twenty-four to thirty-six hours. Within this time simple catarrhal angina is either at a stand-still or subsiding, while diphtheria steadily increases in severity. I attach no importance to the fever and enlargement of the lymphatic glands, as they are common to both conditions. Microscopically you cannot arrive at a diagnosis, as bacteria are also found in both. Many cases of severe catarrhal angina are undoubtedly regarded as diphtheria by superficial observers, and this explains the fact that many physicians cure almost every case of diphtheria."

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[1] *Pathological Anatomy*, p. 225.

[2] *Diseases of Children*, p. 286.

Parenchymatous Tonsillitis is much less frequently met with than the other affections, and so with *tonsillar abscess*, which in young children is extremely rare. Why this should be the case we are unable to explain.

Complicated Forms.—Of these I have already referred to the *croupous* variety, and have nothing further to add, except that under certain conditions, I believe this form of sore throat may take on diphtheritic action. Last year I had a little girl under my care in the Royal Hospital for Sick Children, suffering from scarlatina. She had well-marked follicular tonsillitis with croupous exudation from the commencement of the disease. By the tenth day the patches had cleared off the right tonsil entirely; on the left one there still remained a very little patch, about the size of a small pea. On the twelfth day this tonsil became more swollen, and of a dark red colour, and diphtheritic ulceration rapidly spread from it to the soft palate, uvula, and nares, and also to the other tonsil. The child had a prolonged and tedious attack of diphtheria. I have seen other cases of a similar nature, going to prove that diphtheria may be, so to speak, grafted upon an ordinary sore throat. This occurs most frequently, I believe, in scarlatina. Diphtheria is no doubt frequently met with in this disease at the commencement, or it may come on at a later period, being thus grafted, as it were, upon an ordinary catarrhal condition of the throat.

The *ulcerous* and *parasitic* forms of sore throat are commonly met with in connexion with similar affections of the mouth in children, and do not demand special note.

An important point in connexion with these catarrhal inflammations of the throat, and one which is peculiar both to them and diphtheritic affections, is infectiousness. It is a matter of common experience that, under certain conditions at all events, ordinary catarrhal sore throat is infectious. In a family you seldom have one case without others. So much so, that we constantly hear it said that the "sore throat has gone through the house." It seems probable that catarrhal diseases generally are more or less infectious. Conjunctival catarrh and bronchial catarrh are not unfrequently so. Some years ago, when a number of tourists visited the island of St Kilda, one of the party, in writing an account of the excursion, mentioned an interesting fact confirmatory of the infectiousness of ordinary catarrh. He stated, that the islanders were always afraid lest any of the visitors who came ashore were affected with cold, because it not unfrequently happened that the disease spread through the island. In the light of recent pathology, we find a possible explanation of the infectiousness of diseased conditions of mucous membranes, especially of the mouth and fauces. We know, that in children at all events, the buccal mucous surface forms a suitable nidus for various kinds of vegetable micro-organisms, the *Saccharomyces albicans* (Reess) or thrush fungus flourishes readily in the mouth, and so, in diseased conditions of the mucous surface generally, we may find micrococci and other vegetable forms. These, no doubt, in some way or other, may act as bearers of infection, taking root on any mucous surface, which forms a suitable nidus for their growth. An interesting point, and one well deserving of future investigation in regard to the simpler inflammatory affections of the tonsils, is to what extent these glands may form a nidus or a point of entrance for pathogenous micro-organisms into the lymphatic system. The question, for instance, whether the bacillus tuberculosis in this way gains entrance into the lymph spaces, with which these glands abound, is worthy of attention. The extreme liability of children to tubercular infection is well known, and in them it is often difficult to determine the starting-point of the disease. The clinical fact, that diseased conditions of the buccal mucous membrane, whether catarrhal or otherwise, are usually infectious, is, I think, sufficiently proved.

Symptomatic or secondary forms of sore throat are met with in the eruptive fevers, more particularly scarlatina and measles.

The *scarlatinal form* of tonsillitis is one of the most interesting and important met with in children. It occurs in all degrees of severity. The simplest form is characterized by bilateral redness of the surface of the tonsils, edge of soft palate, and uvula. This usually lasts a few days, and, in a healthy child, disappears along with the eruption, leaving no immediate bad effects. The tonsillar lymphatic glands may sometimes be felt slightly enlarged, generally in delicate or strumous children, in whom irritation is more easily set up. The next form of tonsillitis, in degree of severity, is essentially of a *follicular* nature, both glands, as well as uvula and adjoining soft palate, being red and swollen; the secretion is excessive and of a sticky, mucous nature, but not of a sanious or irritating character. It is in this variety of throat affection that we so frequently meet with yellowish-white patches on the surface of the glands. These are usually of a simple nature, and present the characters of the croupous exudation already described. The throat generally gets well in a week or ten days, but the tonsils are liable to remain more or less hypertrophied. Parenchymatous tonsillitis is, compared with the two forms just mentioned, rare in children under seven. Above that age it is met with more frequently. It may or may not end in abscess.

The *aphthous* and *simple ulcerative* forms of tonsillitis are generally associated with similar conditions of the mucous membrane of the mouth, either during dentition, or as a complication of gastric catarrh, the result of improper feeding or defective hygienic conditions.

Diphtheritic throat is not an unfrequent complication of scarlatina. It may occur, as already stated, during the first week of the fever, or may come on at a later period, as secondary to a more simple form of tonsillar disease. Occasionally, cases of diphtheritic throat are met with, during scarlatinal epidemics, without any rash, a case of this kind perhaps occurring in a family where there are other cases of scarlatina. The question of the peculiar relation which appears to exist between scarlatina and diphtheritic affections is interesting. There can be no doubt that diphtheria frequently complicates scarlatina. In regard to the former class of cases, the question naturally presents itself, whether they are instances of primary diphtheria, or scarlatina without eruption complicated with diphtheritic tonsillitis. This, it appears to me, is very much the point at issue.

In certain epidemics we meet with cases of so-called diphtheria, perhaps, as I have already indicated, one case occurring in a family, several other members of which are actually suffering from scarlatina. My observation has led me to believe, although I do not feel inclined to give a dogmatic opinion on the point, that there are cases of scarlatina complicated with a malignant form of diphtheria, with little or no eruption. In certain epidemics, undoubtedly, we meet with cases of scarlatina maligna, with very scanty eruption, and these often complicated with diphtheria. Dr Morell Mackenzie, in treating of diphtheria, seeks to get over the difficulty by describing a cutaneous eruption in some cases of diphtheria. He says the eruption is sparse, and not of a very definite nature, that it "more or less resembles the rash of scarlatina, but that it differs from it in not being followed by desquamation." Now, we know that desquamation takes place in scarlatina in direct proportion to the amount of eruption; if this be so, we would not expect desquamation in such cases as he describes, even on the supposition that they were of a scarlatinal nature, and I humbly submit that Dr Mackenzie has not proved the negative. The scarlatinal eruption, when scanty, is of so evanescent a nature that it is apt to be overlooked altogether, and it would appear probable that these cases of diphtheria, occurring in close association with scarlatina, may either be a malignant form of the disease without eruption, accompanied by diphtheria as a complication, or the eruption may be so sparse or evanescent, especially if the cases have not been under continuous and close observation from the first, as to escape detection altogether.

The other *symptomatic forms* of tonsillitis most commonly met with, in addition to the diphtheritic and scarlatinal, are in variola, measles, typhus, and also in croupous pneumonia.

In *measles*, the throat affection is usually of a simple catarrhal nature, and gives rise to little inconvenience at the time; afterwards, as a result of the inflammatory condition, the tonsils may remain more or less hypertrophied.

In *typhus*, the tonsillar affection is rarer than in measles, and usually of a simple inflammatory nature.

In *croupous pneumonia*, tonsillitis is sometimes met with in children, often usually associated with aphthous stomatitis, a similar condition of the mucous membrane to that of the skin of the lips, which so often shows a herpetic eruption.

During dentition tonsillar inflammation is seldom absent, when you have any degree of stomatitis. It may be of a simple catarrhal or follicular nature.

Dental caries.—In older children, who are shedding the milk teeth and cutting the permanent ones, you meet with tonsillar inflammation, apparently as a result of buccal irritation.

In *all the forms of stomatitis*, but more especially in the aphthous variety, you are apt to have tonsillitis as a complication.

In *the simpler forms of gastric catarrh*, you meet with a congestive form of tonsillar affection, in conjunction with superficial pharyngeal catarrh.

Hypertrophy of the tonsils is frequently met with in children, and the question which always seems to present itself, Is this hypertrophy ever of a primary nature, or is it the result of previous inflammatory affections of the glands? The decision of this question is not easy, on account of the difficulty of ascertaining in any given case of hypertrophy, which is brought to the surgeon, whether the child has been previously the subject of the milder forms of catarrhal or inflammatory affection of the glands. In young children, as we know, the symptoms are objective; the child cannot tell whether, during some slight previous ailment, it has felt the throat sore or not. Children are liable to the milder forms of these diseases from cold, or in association with the process of dentition. Gastric catarrhal affections are more or less frequently accompanied by the milder forms of tonsillar disease, which is apt to be overlooked if a careful examination of the fauces has not been made. My own experience would lead me to believe, that in the great majority, if not in all cases of hypertrophied tonsils, the enlargement of the gland is secondary to repeated mild attacks of a catarrhal or inflammatory nature. It has been supposed that in delicate and strumous children, the tonsils and lymphatic glands may become enlarged from purely constitutional causes. I think this may, very reasonably, be doubted. It would seem more probable, that while such a constitutional condition as scrofula undoubtedly predisposes to disease of the glands, some exciting cause is required for its development.

Hypertrophy of the tonsils in children gives rise to a variety of conditions, in themselves more or less attended with distress and even danger. Dupuytren, Shaw, and others, have related cases where the development of hypertrophy at an early age induced, by obstructing the respiration, deformity of the chest or chicken breast very like that of rickets. Politzer[1] says narrowing of the nostrils is a frequent result, and when present may be considered a pathognomonic diagnostic sign of greatly enlarged tonsils. Cases are related where, in the absence of any other source of peripheral irritation, enlarged tonsils may produce laryngismus stridulus or spasmodic asthma, in the same way as we know nasal polypi give rise to reflex irritation.

Hypertrophied tonsils likewise predispose to repeated attacks of catarrh, which debilitate and annoy the child. Perhaps the most troublesome and serious result of tonsillar disease is cervical adenitis. The tonsillar glands become readily affected, and disease may spread to any of the other cervical glands. Far more satisfactory results in treatment may often be attained in the earlier periods, in these cases, by directing our attention to the cure of the tonsillar disease, than by local treatment of the glands, even if accompanied by the usual constitutional remedies. I cannot, however, in the scope of this short paper enter into the treatment of these affections. My object has rather been to insist on the importance of their early recognition with a view to treatment and the prevention of ulterior complications, which are so apt to develop themselves in children.

Part Second.

REVIEWS.

Eczema and its Management: a Practical Treatise Based on the Study of Three Thousand Cases of the Disease. By L. DUNCAN BULKLEY, A.M., M.D., Physician to the New York Skin and Cancer Hospital, etc. Second Edition. New York: G. P. Putnam's Sons. London: J. & A. Churchill.

DR BULKLEY'S work belongs to the best class of medical books, viz., those which are the outcome of personal experience and observation, and are not mere compilations. When the first edition appeared in 1881, it took its place at once as being, without exception, the best contribution to the subject of which it treats; and yet we have reasons for doubting whether it is at all as well known to the profession generally, in this country at least, as it deserves to be. It is a trite phrase that no library is complete without such and such a volume, but we feel sure, from a minute acquaintance with the work before us ever since it first emerged from the press, that there are few medical men who would not find it both profitable and advantageous to have a copy constantly beside them. "Eczema," as Dr Bulkley says in his opening chapter, "has been rightly called the keystone of dermatology, and he who masters its management is not only skilled in regard to treating the most common and distressing of all cutaneous diseases, but has acquired a knowledge of the principles of dermatological practice which will assist in the treatment of very many, if not all, other maladies of the skin." In this, no safer guide than Dr Bulkley could be obtained, for no modes of treatment are advocated save those which have stood the test of experience. The author maintains strongly the constitutional origin and relations of eczema as opposed to a purely local pathology, and thus coincides with the opinion of the majority of English writers on the subject. Still he has little belief in the heredity of eczema as a disease, although the habit or condition which predisposes thereto, namely, the gouty, strumous, and nervous states, may be, and undoubtedly are, transmitted. There are a number of carefully compiled statistical tables dealing with the various ages and circumstances under which eczema may be developed, which will be found worthy of study.

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[1] *Jahrbuch für Kinderheilkunde*, Band xxi. Heft 1 and 2.

Dr Bulkley shows that eczema may be regarded as constituting rather more than a third of all cases of skin disease, and that it is nearly equally common in both sexes. The chapters which deal with the symptoms and the diagnosis of eczema have been prepared with the utmost care, and if their contents have been mastered, there should be little difficulty experienced in deciding whether any given case is one of eczema or not. One fact should always be borne in mind, that more errors occur in supposing cases to be eczema which are not this eruption, than in failing to recognise the disease when present. The nature and the causes of eczema take up two long and most instructive sections, and prepare us for the division on treatment, which is thoroughly rational and full in the matter of details. A specially important subject is that of infantile eczema, which even in treatises devoted solely to the diseases of children is apt to be but cursorily alluded to. This is very amply discussed by Dr Bulkley, and the pages devoted to it will be found to contain much new, as well as valuable, information. Among this is an observation that infants with eczema are not in the habit of rejecting their food, but have often been noted as particularly "dry babies," whereas Dr Bulkley has rarely met with a child who brought up its milk much who was troubled in any degree, if at all, with eczema. He explains this on the assumption "that the relief to the system from the acid ejected from the stomach has seemed to spare them from the acid blood state which is believed to exist with eczema. Possibly the immunity of " wet babies may be explained by the relief to the organs of digestion afforded by the rapid rejection of food which would otherwise be in excess, and thus lead to imperfect carrying out of the processes of assimilation and disintegration of tissue." This is in accordance with the idea of Bohn that many cases of eczema in children are due to an overloading of the system with nutritive material, and the consequent production of "Fettsucht." While the general question of eczema is handled so well, the description of its local varieties is no less comprehensive and thorough. We would especially direct attention to the account which is given of eczema of the palms and soles, the only one at all satisfactory we have seen anywhere. Another chapter of much value is that concerning eczema of the anus and genital regions, a form at once common and troublesome in the extreme.

The volume concludes with some sensible remarks on diet and hygiene in eczema, and a well-selected formulary. One could have wished that Dr Bulkley had expressed an opinion as to the value of some remedies which have attained a certain degree of popularity since the first edition appeared. Such are salicylic acid, boracic acid, the various forms of salve and plaster muslins introduced by Unna, and resorcin. Indeed, with the exception of some change in the statistical numbers, and a few additional paragraphs, there is practically no alteration in the contents, and none whatever in the number of pages of this second edition. This reminds one of a remark of the late Professor Syme when speaking of his *Principles of Surgery*, that each successive edition found it smaller, not larger, than before. It only remains to be mentioned that the book is admirably printed, and of convenient size.

A Treatise on Bright's Disease of the Kidneys: its Pathology, Diagnosis, and Treatment. By HENRY B. MILLARD, M.D., A.M., New York. New York: Wm. Wood & Co.: 1884.

WHEN we already possess so many admirable works on renal disease, any new book on the subject should have some distinct *raison d'être.* After careful perusal of this new volume, we feel somewhat doubtful whether it is really called for or not. It gives a very fair statement of anatomical details, illustrated with many microscopical drawings, the majority of which are original and distinct, if somewhat diagrammatic. Then follows a *résumé* of physiological facts and theories, after which the author discusses the significance of, and methods of detecting albumen and tube-casts. He shows that he is well abreast of modern advances, the recent works of Rendall, Capitan, and Chateaubourg being laid under contribution.

Dr Millard classifies the various forms of nephritis under the heads of croupous, catarrhal or interstitial, and suppurative nephritis. Of these he says, "I regard the two first not as essentially distinct diseases of the kidneys, but as identical in character, but differing in the degree in which the connective tissue and the epithelia are respectively affected. They always, as will be shown, coexist, and one cannot exist without the other being developed at least in some degree." In a footnote he adds, "I find myself supported in this view by Professor Rosenstein," but says not a word about the work of Saundby, who has been the foremost champion of the same opinion in this country.

The treatment is succinctly stated on rational grounds.

The general style of the book is not bad, but it is disfigured by one or two grievous perversions of English; for instance, the author speaks of "well persons," meaning those who are in good health, and makes use of a curious mongrel word, "causology." In the matters of paper and print, the book is as near perfection as possible.

On Bedside Urine Testing: including Quantitative Albumen and Sugar. By GEORGE OLIVER, M.D. Lond., M.R.C.P. Harrogate. Second Edition. London: A. K. Lewis: 1884.

ANY improvement in clinical methods is of benefit to the medical practitioner, and we therefore gladly welcome the new edition of this excellent little work. Its speedy appearance is the best proof that it supplies a want that has been felt.

It begins with a criticism of the ordinary means of testing for albumen, with the older as well as the newer reagents, in the course of which the author expresses his opinion that the most delicate tests are the potassio-mercuric iodide, the picric acid, and the sodium tungstate. In this our own experience allows us fully to concur, without, however, committing ourselves to any view regarding the exact form of the albumen precipitated. It then deals with the mode of preparing and using the test-papers, upon which the system is based, qualitatively and quantitatively.

In the same way the work deals with the estimation of sugar in the urine, and the author's test for glucose, founded on the fact that it discharges the colour of indigo, is described. The mode of using the indigo-carmine test-papers for qualitative and quantitative estimation is then given, and the book ends with a description of the apparatus required.

We would congratulate Dr Oliver on having brought out a system of urine testing at once so simple and so satisfactory, and feel assured that it will soon be in very general use.

Diabetes Mellitus: a Synopsis of its Pathology, Physiology, Etiology, Incipient and Progressive Symptoms, Causes of Death, Sugar Tests, and Treatment. By HARVEY J. PHILPOT, L.R.C.P., M.R.C.S., Licentiate of the University of Toronto, etc., etc. London: Sampson Low & Co.: 1884.

THIS little volume is, as it is put by its author, "dedicated, with feelings of great respect and regard, to the Right Reverend the Bishop of Niagara, who, when on a visit to this country some years ago, led me to take a more than ordinary interest in the subject of this monograph," in which dedication there is such a refreshing candour as to make it quite worthy of quotation. It contains seven chapters, each of which corresponds to one of the factors in the over-lengthy title of the book.

From the general scope of the work it is evidently destined more for the general than the medical reader, and it will no doubt prove not only interesting but useful reading for him. Mr Philpot, at the same time, has brought his little *brochure* up to our present knowledge of diabetes in almost every respect, and if we were to take exception to any part, it would be to the part devoted to treatment, for it seems to us that Mr Philpot does not lay such stress as he ought on the great advantages which codeia undoubtedly possesses.

Spinal Curvature and Affections of the Hip, Knee, and Ankle Joints. By H. MACNAUGHTON JONES, M.D., of Cork. London: J. & A. Churchill: 1884.

THIS little work contains a series of interesting cases of the above affections. The greater part of the book is devoted to the treatment of spinal curvature by Sayre's method. But there are several successful cases of disease of the hip, knee, and ankle recorded. The cases are well reported, and the illustrations excellent. Surgeons will find much interesting matter in this book.

Injuries and Diseases of the Jaws. By CHRISTOPHER HEATH, F.R.C.S. Third edition. London: J. & A. Churchill: 1884.

MR HEATH'S book does not need recommendation. We notice that it is considerably enlarged, and the number of illustrations increased. He tells us that it is twelve years since the issue of the second edition, and that the alterations in the present one are mainly the work of Mr Frederick Eve and Mr Rushton

Parker. Heath on the Jaws has always been a standard work, and is now more valuable than ever.

Index of Surgery. By C. B. KEETLEY, F.R.C.S. Second Edition. London: Smith, Elder, & Co.: 1884.

MR KEETLEY has improved his excellent little book in many ways, not least in introducing antiseptic methods of treatment. In fact, he himself considers this the main feature of the present edition. In the last he endeavoured to steer between Listerism and the opposite, whatever that may be called. He now appears as a believer in aseptic surgery. We congratulate him on the change. From what we have examined of the "Index" we have no hesitation in recommending it to students and practitioners.

The Roller Bandage. By WILLIAM BARTON HOPKINS, M.D. Philadelphia: J. B. Lippincott & Co.: 1883.

DR HOPKINS manages to fill nearly a hundred pages of print with the various uses to which a roller bandage may be put. There are seventy-three illustrations, very roughly executed, and in some instances demonstrating very rough work; but they have one merit—they are evidently original, which is more than can be said of most of the illustrations in the various books on practical surgery which have reached us from the other side of the Atlantic.

Doubtless Dr Hopkins has had pleasure and profit in the preparation of his little book. We cannot imagine any student or practitioner deriving the same from reading it.

Orthopædic Apparatus: a Series of Illustrated Plates, with corresponding Descriptions, of the various Forms of Mechanism employed in the Treatment and Cure of the numerous Deformities of the Human Body. By F. GUSTAV ERNST. London: Printed and Illustrated by Sprague & Co.: 1883.

THIS is more than an ordinary catalogue of orthopædic instruments. It is a series of very fine illustrations of some of the most improved and scientific apparatus used to correct or modify the various deformities which may occur in the human body. Some of these are more complicated than we of the northern school of surgery, perhaps, care to see; but there is no doubt that the book will fulfil

Mr Ernst's intention in giving it to the profession, "to enable the medical man readily to see what apparatus are made for various deformities, and to determine which would be the most suitable for the case under his care." We would commend it to the notice of every one who has to undertake the management of cases of deformity.

Treatment of Cancerous Obstruction of the Œsophagus by Permanent Catheterism. By JOHN CROFT.

THIS short but most interesting paper is reprinted from the last volume of Reports of St Thomas's Hospital. In it we have an argument precisely and concisely stated, and illustrated by two well-described cases, in favour of the method of permanent catheterism of the œsophagus in stricture, as contrasted with the operation of gastrostomy, first described by Dr Krishaber in 1881. Mr Croft's experience is so far encouraging. He advises that the tube should be passed through the mouth rather than the nose, that it should be not smaller than a No. 5 nor larger than a No. 12 catheter (English gauge)—probably best about a No. 8; that it should have a funnel-shaped orifice, which should be kept constantly plugged when not in actual use for feeding purposes. While wearing such a tube his patients gained flesh and weight.

Ambulance Hand-book for Volunteers and Others. By J. ARDAVON RAYE, L.K. & Q.C.P.I., L.R.C.S.I., etc. London: J. & A. Churchill: 1884.

THIS book is one which, if it were improved in certain directions, might become a valuable hand-book on ambulance work. It is very unequal both in quantity and quality. The notes on some matters—for example, on the position of the arteries—are as ample as need be, while on others they are very meagre. Some of the plates at the end of the work are very good. Others, we should think, must be confusing to those who have no practical knowledge either of anatomy or surgery. A careful revision might make it a standard work on the subject with which it deals.

St Thomas's Hospital Reports. New Series. Edited by Dr SEYMOUR, J. SHARKEY, and Mr FRANCIS MASON. Vol. XII. London: J. & A. Churchill: 1883.

THE present volume contains as usual a number of important papers and essays on subjects of professional interest. The two which will probably attract most attention are the "Report of the Throat Department" by Dr Felix Semon, noticed on p. 77 of the present Journal, and the "Surgical Reminiscences" of Mr Le Gros Clark. They both abound in hints that will be found invaluable in diagnosis and treatment.

Dr Ord has an interesting article on the glycosuria of people over fifty years of age. It is based on his records of some twenty-two cases, in which the glycosuria was not accompanied by any marked diuresis. In these twenty-two cases he found it associated with other important conditions, such as nerve disorder, gout, errors of diet and albuminuria, of which he regards it as a symptom rather than having the individual importance it assumes in diabetes mellitus.

Dr Stone contributes two interesting studies, one on the "Electrical Resistance of the Human Body," the other on "Some Effects of Brain Disturbance on the Handwriting." The latter is illustrated by some curious examples.

Mr Croft, following Krishaber, argues in favour of permanent catheterization in certain cases of cancerous obstruction of the œsophagus, and gives details of two cases treated by this method. He contends that this operation is more immediately beneficial in its results than gastrostomy, that it may be performed in cases where there is not a reasonable prospect of gastrostomy proving successful, or where gastrostomy is considered the preferable operation, but where the patient's state is too low to admit of its being done at once, and that the risks attending the practice are few in number, and not severe when the case is conducted by a careful medical man.

In addition to these, there are papers and cases by Bristowe, Harley, Payne, Gulliver, Hadden, Pitts, Clutton, and Makins, every one of which will repay a careful perusal.

Transactions of the Clinical Society of London. Vol. XVI.
London: Longmans, Green, & Co.: 1883.

Transactions of the Pathological Society of London. Vol. XXXIV.
London: Smith, Elder, & Co.: 1883.

NEITHER of these volumes can be said to lend itself readily to criticism. They contain the reports of the work done by the Societies during the session 1882–83, and are valuable as preserving much good matter that might be lost were the meagre reports, which usually appear in the pages of our weekly medical journals, alone trusted to. They are admirably illustrated, and medical practitioners may, if they care to look, find hints, more particularly in the Clinical Society's volume, that may prove of benefit in their own practice. A most important part of the Pathological Transactions is the report of the discussion on the "Morbid Anatomy of Diabetes."

Transactions of the Medical and Chirurgical Faculty of the State of Maryland at its Eighty-Fifth Annual Session, held at Baltimore, Ind., April 1883. Baltimore: Press of Isaac Friedenwald: 1883.

THE chief features of interest in these Transactions are the reports of the various sections on the different departments of practice, and the annual address by the orator, Dr J. S. Billings, on medical bibliography. In addition to these are a number of volunteer papers, which include an excellent article by Dr John Mackenzie on "Naso-Aural Catarrh and its Rational Treatment;" another on "Hypnotism" by Dr Boyland, in which he draws attention to the increasing tendency to the indiscriminate use of opium, chloral hydrate, and bromide of potassium; and a third by Dr Chancellor on the "Sewerage of Cities," in which he advocates the adoption of a pneumatic system.

Transactions of the College of Physicians of Philadelphia. Third Series. Vol. VI. Philadelphia: P. Blakiston, Son, & Co.: 1883.

THE present volume contains in all thirty-one papers on various subjects of professional interest, ranging from cases of abscess of the brain to the fæces of starch-fed infants. Among them may be mentioned Dr Solis Cohen's paper on the question whether laryngectomy tends to the prolongation of life, which he answers in the negative; Dr Roberts's recommendation of heart-puncture as a therapeutic procedure; Dr H. A. Wilson's case of transposition of viscera; and Dr Keating's article on the importance of micrococcus in the blood of malignant measles. A description of Dr Porter's xanthic oxide calculus, which seems to be on its travels, also appears. The volume is one of much interest and great practical value.

The Pharmacopœia of the North-Eastern Hospital for Children. Compiled by a COMMITTEE OF THE STAFF. London: J. & A. Churchill: 1883.

THIS pharmacopœia is excellently compiled, but the compilers are not so fortunate when they endeavour to answer the question, "How to bring up Babies?" With the dictum contained in their second direction, namely, "Let the mother suckle her child, if she have plenty of milk, *and give it nothing else until it is seven months old,*" we have no sympathy. The strongest and healthiest babies are those who not only are brought up on the breast, but receive food regularly from their earliest days, even though the mothers have plenty of milk.

L'Année Médicale (Cinquième Année) 1882. Publié sous la direction du Dr BOURNEVILLE. Paris: E. Plon et Cie.: 1883.

THIS work corresponds in some measure to our *Braithwaite's Retrospect*, but is more catholic in its compilation, giving as it does a periscope of the progress made in medical science all over the world. The review of the year's medical events adds to the interest of the volume, while the double index of subjects and of authors' names makes it very easy of reference.

The Untoward Effects of Drugs: A Pharmacological and Clinical Manual. By Dr L. LEWIN, Docent of Materia Medica, Hygiene, and Public Health, in the University of Berlin. Second Edition, Revised and Enlarged. Translated by J. J. MULHERON, M.D., Professor of Principles of Medicine, Materia Medica, and Therapeutics, in the Michigan College of Medicine. Detroit, Mich., U.S.A.: G. S. Davis: 1883.

THIS is an excellent translation of a very valuable work. The design of the author is to place before the profession the "untoward effects of drugs," namely, the effects of medicine other than those for which they were administered, which in many cases are most injurious to the patients.

The author states how these "untoward effects" may be avoided in many cases, and where that is not possible how they may be modified. The book deserves a wide circulation.

Invalid's Recipe Book. By J. L. CROMBIE, M.D. North Berwick. Price One Penny.

THIS is a neat little pamphlet of 32 pages, containing 45 recipes for sick-room cookery, some very plain, sensible pieces of advice as to sickness, treatment of the doctor, disinfectants, baths, etc. Its price renders it to be within the reach of the very poorest invalid, and as Dr Crombie, the author, tells us in his preface, he can say that "I write it out of great good-will unto my countrymen."

Clinical Figures. London: Lebon & Co.: 1884.

THESE are diagrams, for the most part in outline, intended for the delineation of the seat and extent of the disease, which is now so common in clinical observation.

The series comprises figures of the brain (three surface views of each hemisphere after Ecker, and six sections after Pitres); figures of the thorax and abdomen (anterior and posterior aspects); outlines of the body, for skin diseases, nerve lesions, etc. (both front and back); outlines of the head, for skin diseases, nerve lesions, etc. (two side views, front and vertex); outlines for diseases of the eye (two outlines of the fundus, of the eye, and of the iris respectively); and outline for diseases of the larynx. All these figures are clear and distinct; they are printed on thin paper gummed behind, and they will be of great use in recording cases. Considering the manner in which they are got up, they are very moderate in price.

Opium Smoking and Opium Eating: their Treatment and Cure.

By GEORGE SHEARER, M.D., F.L.S., Liverpool.

THE preface of this little book tells us that it was originally an essay to which a prize of £50 was awarded in 1881. The preparation of this work must have caused Dr Shearer a world of trouble. He professes to have read every book on the subject that he could get. Certainly he quotes from an enormous number of authors. Dr Shearer, having lived for several years in China, speaks with authority on the subject of the Chinese habit. With the majority of those who have written on the subject, he believes that the opium trade between India and China is damaging to the Chinese as a nation, contrary to the wishes of their government, and by no means creditable to this professedly Christian nation. We naturally turn to the chapter on treatment to see what Dr Shearer has to say on the subject of cure. We there read, "The first and essential element in the cure of the opium habit is to insist on the sudden and immediate withdrawal of the drug." Quoting Dr Fleming of Birmingham, he says further on, "Many persons can summon courage to undergo with a kind of desperate determination severe suffering for a short time, who could not sustain a protracted struggle against a lesser evil. Weaning is effected in a few days."

Dr Shearer has supplied us with a very able and exhaustive treatise, which is furthermore high in its moral tone and interesting in its style.

Part Third.

MEETINGS OF SOCIETIES.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

SESSION LXIII.—MEETING VII.

Wednesday, 7th May 1884.—Dr LITTLEJOHN, *President, in the Chair.*

I. ELECTION OF ORDINARY MEMBER.

Mr J. Craig Balfour, L.R.C.P. and S. Ed., Edinburgh, was elected an ordinary member of the Society.

II. EXHIBITION OF PATHOLOGICAL SPECIMENS.

1. *Dr Wm. Russell* showed (*a.*) A LUNG FROM A CASE OF TUBERCULOSIS, which he had removed from a child 4 years and 9 months old, who had been under his care for fully two months. The case, although not uncommon, presented some points of clinical interest. The general condition during the early period of his attendance was one of debility and listlessness with slight cough. The temperature was febrile. There were no perspirations and no diarrhœa. The tongue was clean and moist. There was a family history of phthisis. At the extreme base of the left lung posteriorly there was a localized area of dulness, over which coarse râles were heard. The physical signs over the rest of the lungs were normal. The condition then appeared to be such as is frequently seen in children making a bad recovery from pneumonia. Treatment was of no practical benefit; the child did not improve. Emaciation progressed; the temperature attained a higher range, reaching 103° or more at night, and falling to about 100° in the morning. There was a total absence of perspirations; the cough was a little more marked, and the respirations became somewhat more accelerated. Signs developed throughout the lungs, which, coupled with the height and the type of the temperature, pointed to the opinion that these organs had become the seat of a miliary tubercular deposit. A week or ten days before death unequivocal evidence of the condition having implicated the base of the brain supervened. The lung showed that the disease had begun at the base, and was probably of inflammatory origin; that this had probably become the infective centre for a general tuberculosis, primarily infecting the lung and secondarily the brain, for the latter presented numerous gray tubercles at its base. The only other organ which contained tubercles was the spleen. Dr Russell had carefully examined the lung and a crushed tubercle from the brain, and had not found the bacillus tuberculosis. Dr Russell also showed (*b.*) A PORTION OF THE BRAIN FROM A CASE OF TUBERCULAR MENINGITIS, which he had removed from a child

of 11 months, who had been under the care of Dr Smith of Gorebridge. He showed it as a good specimen of tubercular disease of the base of the brain. The child had had otorrhœa, but he did not suppose there was any causal relationship between that and the condition of the brain found post-mortem.

2. *Dr MacGillivray* showed A PORTION OF LOWER JAW REMOVED FOR MALIGNANT TUMOUR. The operation was performed about a fortnight previously on a girl æt. 15. Three months before she had complained of pain in one of the back molars, which was extracted. The gum did not heal. When she was brought to hospital, there was a well-marked swelling of the jaw like an epulis, and a small ulcerated surface where the tooth had been removed. The swelling was blistered in hopes that it might be inflammatory, but did not give way to treatment. He therefore cut down upon it, and, finding the body of the bone affected, removed the angle and part of the ramus. A microscopic examination showed that the disease was a round-celled sarcoma.

3. *Mr Joseph Bell* showed A HALF TONGUE REMOVED FOR CANCEROUS DISEASE that day. The operation he had done was that known as Whitehead's, which consisted in successive snips or cuts with the scissors. The tongue was first split along the middle line and then divided close to its root on the affected side, the vessels being tied as they were cut or exposed. The hæmorrhage was very slight, the lingual artery being seized before it was cut. He thought the patient, an old man, had every chance of making a good recovery. There was no external wound, the tongue being pulled well forward and easily got at.

4. *Dr James Carmichael* exhibited the LARYNX of a girl 3½ years old, who was admitted on the 4th May into the Royal Hospital for Sick Children. She was in a hopeless state of asphyxia, and died six hours after admission. On examining her throat the fauces were covered with a grayish-white exudation, and from careful observation of the character of the breathing and physical examination of the chest, he expressed the opinion that the child suffered from membranous inflammation of the fauces, larynx, and trachea, and that the disease was probably spreading, as it usually does in diphtheria, into the bronchi. In these circumstances tracheotomy was not indicated. After death the opinion of the case which had been previously formed was corroborated, as the specimen now shown to the Society testified. The fauces, as would be seen, were covered all over with a sloughy purulent-looking membrane, which also covered both the upper and under surface of the epiglottis; this extended not only into the cavity of the larynx, which was almost occluded by it, but down the trachea as far as its bifurcation. The right and left bronchi were filled with sticky muco-purulent material. The

mucous membrane beneath the exudation in larynx, trachea, and bronchi was swollen and congested; this was especially well marked over the arytenoid cartilages. On the pericardial surface of the heart were some small ecchymoses. Both lungs were congested and showed some emphysematous and collapsed patches.

5. *The President* showed—*First*, THE PHARYNX, GULLET, AIR PASSAGES, AND STOMACH of a case of poisoning with carbolic acid. The patient was found at 4 A.M. in a public park dead and lying on his face. He was last seen alive at 1 A.M., when he was intoxicated. Unfortunate in business, he had threatened to destroy himself. The appearances were highly characteristic of this active poison, and all the parts smelt strongly of the acid. *Second*, ULCERATION OF THE STOMACH, RUPTURE, AND PERITONITIS. The peculiarities of the case were,—1st, The situation of the ulcer, which was in the centre of the lesser curvature, and had given way in two places. The ulcer was the size of a florin. 2nd, The absence of vomiting and the remarkable latency of the symptoms of peritonitis. Deceased, who was fairly nourished, had suffered from dyspeptic symptoms for two years, and derived benefit from the use of charcoal. Recommended by his medical man to take change of air, he left London on Thursday night, 20th March, and arrived next morning in Edinburgh, went to his work, at which he was engaged the whole day. At 4 A.M., Friday, he woke his landlady, and complained of cramp in the stomach. Took hot water and afterwards castor oil with great benefit, but remained in bed. At 8.30 he expressed himself as feeling well; at 9 P.M. he was found dead. There was no vomiting. *Third*, RUPTURE OF THE DIAPHRAGM. The rent was nearly 4 inches long, and was situated on the left side. Deceased was found at the side of the Water of Leith below the Dean, lying face downwards across a low wall which was covered with turf. His life was insured, and the question came to be, "Had he committed suicide by throwing himself over the bridge, or had he fallen accidentally into the water and been washed into the position in which he was found by the stream which had been in flood?" The post-mortem revealed this lesion, and the presence of the cardiac end of the stomach and the spleen in the left cavity of the chest. There was no other serious injury on the body. The friends were ultimately satisfied that the case was one of suicide. The President remarked on the importance of such specimens being placed for reference in museums, and referred to a case of injury to the diaphragm, in which Dr Matthews Duncan and himself had been anxious to see such injuries, but neither in the museum of the Royal College of Surgeons nor in that of the University were any to be found.

Dr Gunning remarked, with reference to rupture of the diaphragm, that once having an English horse out to grass he sent a boy for him. He was galloped in very hard, and fell dead at the door. A post-mortem examination showed this lesion, a rupture of the diaphragm.

III. ORIGINAL COMMUNICATIONS.

1. *Dr Foulis* read his paper ON A CASE OF PATENT DUCTUS ARTERIOSUS, WITH ANEURISM OF THE PULMONARY ARTERY, which appears at page 17 of this Journal.

The President said he was sure the Society would allow him in their name to thank Dr Foulis for his able and instructive paper, and for his admirable manner of illustrating it. He would call on Dr George Balfour to offer some remarks on this very rare lesion.

Dr Balfour said that by Dr Foulis's kindness he had had the opportunity of seeing this case during life, and as Dr Foulis very correctly stated, though he gave it as his opinion that the patient had a patent ductus arteriosus, he by no means felt quite certain about it, as he had never had an opportunity of observing previously a similar case post-mortem. All cardiac cases were rendered doubly interesting from the varied character of the results which followed similar lesions. This was particularly the case in reference to congenital defects. Serious results often followed slight imperfections. A trifling patency of the foramen ovale might cause death rapidly, while, on the other hand, great defects might lead to little or no result. An entire absence of the septum ventriculorum might occur and exist for many years, the subject of the malformation doing well, and dying ultimately, perhaps, of some other disease or accident, as occurred in a case he had seen. They were all obliged to Dr Foulis and Dr Wyllie for the care with which they had placed this case before them. He now saw his way pretty clearly to make a diagnosis of patent ductus arteriosus during life. He had seen four cases in which he had given as his opinion that there was a patent ductus arteriosus, but this was the first in which his opinion had been verified. The first case he saw with the late Dr Warburton Begbie eleven years ago. In her case there was very faint pulsation between the second and third ribs on the left side, a loud systolic murmur, with vibratory thrill loudest in that position, propagated into the arteries, and extending down the aorta, and lost about the iliac arteries. In her case there was considerable cyanosis of the face and all the extremities, which were purple, cold, and puffy. Dr Begbie had seen her with his father ten years previously, and both had arrived at the same conclusion as himself. Prof. Sanders also saw her. He (Dr Balfour) had seen her since. The cyanosis was diminished. The thrill and murmur still continued, but were not so marked. The condition might be undergoing a cure by thrombosis of the duct, and if the thrombosis did not go too far it would be a perfect cure. The next case was that recorded by Dr Wood Smith, which had been under his (Dr B's.) care in the

Infirmary. The pulsation was very distinct in her case, and the murmur was entirely similar—a loud thrilling vibratory murmur between the second and third ribs. He had taken this case with considerable care, but the book in which it was recorded had disappeared. Dr Wood Smith had since informed him that the girl had gone to Liverpool and was married. The third case was one to which Dr Foulis had referred as having been in the Infirmary at the time he (Dr Balfour) had left it. The lesions resembled much more closely those of Dr Foulis's case than either of the other two, the loud vibratory murmur, mainly systolic, which was conveyed through every artery of the body, and was accompanied by a peculiar metallic clang. The murmur extended beyond the click of the second sound, and there was probably some lesion of the pulmonary valves. The girl had not come in for her cardiac affection, but for scoliosis and weakness of the back. The cardiac condition was only discovered accidentally. These cases were not susceptible to any treatment beyond rest and blood tonics.

Dr Wyllie said he differed slightly from Dr Foulis on the question of the production of the second bruit. The first bruit had a double origin. He should be inclined to think that the second had also a double origin.

Professor Grainger Stewart said he had greatly enjoyed this paper as an admirable statement of a rare case. In his own experience he could only recall one case that corresponded with it. He was of opinion that there was a patent ductus arteriosus, but there was no post-mortem to confirm it. A gentleman consulted him about five years ago, after having been advised to give up his professional duty because of hæmoptysis and cardiac murmur. He (Prof. Stewart) was satisfied on examination that the cardiac lesion was congenital, and probably, as he had said, a patent ductus arteriosus. He ventured to advise the patient to resume work, which he did. Little more than a year ago he saw the gentleman in Cannes dying of pulmonary phthisis. He died afterwards at home, but post-mortem examination was not allowed. He was inclined to agree with Dr Wyllie as to the causation of the second bruit. He thought that if there was thickening of the tricuspid valve to help towards the production of the first bruit there must have been incompetence enough to allow of the second. He should like to ask Dr Foulis if he did not think that the patient died of ulcerative endocarditis. This would account for the albuminuria, for the lesions in the lungs and spleen, for the vegetations on the valves roughened and breaking down.

Dr Gibson said that in common with the other members he felt greatly indebted to Dr Foulis for the careful way in which he had brought this case before them. There was one point on which he felt some difficulty. Dr Foulis was evidently of opinion that the blood current passed backwards and forwards through the patent ductus arteriosus. Now, the pressure in the aorta was much greater than in the pulmonary artery. He did not see how, in accordance with physical laws, the blood could flow from the pulmonary artery into the aorta.

Dr Wm. Russell said that the idea he had formed of this case was that in the earlier part of its history the murmurs had to be accounted for quite apart from the vegetations found after death. He would submit that in the latter part of the case, when the murmurs had disappeared, the condition was one of vegetative endocarditis, as suggested by Prof. Stewart. He should like to ask if the systolic murmur could not be accounted for by the presence of aneurism on the pulmonary artery. With Dr Gibson he thought that the current of blood would not go from the pulmonary artery into the aorta; on the contrary, the current would naturally go from aorta into pulmonary artery. As Dr Foulis lucidly brought out, the current impinged right on the centre of the aneurism on the pulmonary artery. The diastolic murmur, at least, was probably produced in this way. Was not the aneurism on the pulmonary artery sufficient to produce a systolic murmur without calling in anything else to explain it? He had asked Dr Foulis whether the temperature was elevated after the patient's return from the country. It was, and this, coupled with the other conditions, showed that the condition was very different from what it was when Dr Foulis first saw the patient, and that she was at the later period suffering from vegetative endocarditis.

Mr Cathcart said, with reference to Dr Gibson's argument that the blood-current could not pass from the pulmonary artery into the aorta, it must be remembered that it did so in the fœtus, and that in this case they had a fœtal condition existing to adult life. The flow of blood through the ductus arteriosus was just the persistence of part of the fœtal circulation.

Dr George Balfour pointed out that the thrill and loud systolic murmur were propagated down the aorta. Theoretically, there should be no passage, but practically, he believed there was, and that it was probably aided to some extent by suction from the passing arterial blood.

Prof. Stewart further pointed out that the dilatation on the aorta, opposite the ductus arteriosus, was in favour of the view that the blood did pass from pulmonary artery to aorta.

Dr Foulis said he had to thank Mr Cathcart for using the very argument he meant to have brought against Dr Gibson's contention. In the fœtus the duct remained patent till the first breath. It then began to close, and the best observers stated that the process of closure was usually over in ten days. But there was no reason why the fœtal condition should not continue into adult life, and, as Prof. Stewart had remarked, the dilatation of the aorta opposite the duct showed that the ventricular systolic current had impinged on the wall of the aorta at that spot. There was no other way of explaining this dilatation of the aorta. With regard to Prof. Stewart's remarks about the presence of ulcerative endocarditis, what struck him at the time was this, that the extremely hard nature and fibrous character of the vegetations on the pulmonary and other valves of the heart at once showed that they could not have been produced in weeks, but had probably been forming during the course of years. In regard to Dr Wyllie's remark, the tricuspid valve was so competent that he could not see how it could assist in the production of the second bruit. In conclusion, he thanked the Society for the kind manner in which his paper had been received.

2. *Dr Gunning* read his paper ON SOME POINTS OF IMPORTANCE IN THE TREATMENT OF MEDICAL AND SURGICAL CASES, which appeared on page 1104 of vol. xxix. of this Journal.

The President, in the name of the Society, cordially thanked Dr Gunning for his paper.

Owing to the lateness of the hour there was no discussion.

OBSTETRICAL SOCIETY OF EDINBURGH.

SESSION XLV.—MEETING VI.

Wednesday, 14*th May* 1884.—Dr CONNEL, *President, in the Chair.*

I. *Dr Skene Keith* showed several OVARIAN TUMOURS and FALLOPIAN TUBES.

II. *The President* showed a pair of AXIS-TRACTION FORCEPS with detachable traction-rods. He had employed them with much satisfaction in a considerable number of cases. He claimed for them the advantage of perfect cleanliness, the socket into which the rods fitted being easily got at; and also that the rods being removable, the instrument could be employed either as an ordinary pair of forceps or as an axis-traction forceps.

III. *Dr Underhill* read a paper by *Dr Matthews Duncan* on HÆMORRHAGIC LUPUS OF THE FEMALE GENITAL ORGANS, which appears at page 5 of this Journal.

Dr Underhill said that this paper was of great interest and value, as bringing a rare form of disease before the Society, and it was of special value in connexion with Dr Macdonald's recent paper read here. These cases of Dr Duncan's had not the hypertrophic character of the ordinary lupus. The last case resembled closely one described by Dr M'Lintock of Dublin. They were extremely chronic in their character, and seemed to have no relation at all to malignant disease nor to syphilis. Dr Duncan had given no account of the histology of the cases, and he (Dr Underhill) hoped to see this fully investigated and the treatment clearly indicated.

Professor Simpson felt that the Society was greatly indebted to Dr Duncan for sending so interesting a record of these cases, and that the Transactions would be enriched by them coming so soon after the cases described by Dr Macdonald. An account of the histology of the disease would have rendered the paper still more valuable, and it required this to enable us to form anything like an adequate judgment of the real nature of those cases.

Dr P. A. Young was surprised to find that one of these cases should have been benefited by so simple a treatment as that of black wash, and suggested the possibility of this case being somewhat different in its nature from the others.

Dr Chapman did not think these were cases of true lupus at all, and thought that the first three cases were different in their nature from that of the fourth. He had examined microscopically the specimens obtained from Dr Macdonald's cases, and had found the characteristics of lupus absent. The condition was undoubtedly different from that of true lupus, and he hoped to be able to show sections from Dr Macdonald's case at the next meeting of the Society.

Dr Underhill pointed out that Dr Duncan had guarded himself in his paper against committing himself to a definite opinion as to the true nature of the disease, and employed the term "lupus" only provisionally until the true nature of the condition was cleared up by the microscope.

Dr Leith Napier had seen cases in which it was extremely difficult to discriminate between cancer and lupus. For example, he had a case seen some time ago by Dr Halliday Croom, and at that time they both were of opinion that it was cancerous, but he was now of opinion that they were wrong. There was no fœtor, and the patient seemed to die from the exhaustion resulting from the hæmorrhage.

IV. *Dr Leith Napier* read a paper on POLYPOID UTERINE TUMOUR, which will appear in a future number of this Journal.

Professor Simpson thought that, so far as he could judge, a portion of the placenta had been left, and that blood-clot had formed round it. He thought that Dr Napier might have introduced his finger, or indeed his whole hand, by the aid of the volsella and have removed the portion left. It was seldom that the tissue was so dense but that it could be removed by a little careful manipulation. Otherwise he quite approved of the treatment.

Dr Underhill had listened to the paper with interest. He quite agreed that most likely a portion of placenta retained was the cause of the trouble. He recalled a case in which he delivered a placenta which, on examination, seemed to be entire, but on hæmorrhage occurring he found that the cause was a portion of placenta still remaining. This was found to have come from the centre of the placenta, but the space left by it had been filled up with blood-clot, and had given the appearance of an entire placenta. He had no doubt that had it been left to remain it would have formed the starting-point of such a condition as that described by

Dr Napier. It was an interesting point in Dr Napier's case that the hæmorrhage was so long delayed.

Dr Chapman asked how much consisted of blood-clot and how much of placenta, and also what proportion was represented by the muscular tissue? He had seen a case in which part of a placenta had been retained for six months, and on curetting a piece about half the size of a walnut was removed. This, under the microscope, had similar appearances to those described by Dr Napier.

Dr Rattray had listened to the paper with much pleasure. He recollected one case in which, after a perfectly normal confinement, a lady had sudden severe hæmorrhage. On examining the uterus he found a fragment of placenta, though the latter, on examination, seemed quite entire. In another case he removed a placenta succenturiata after an attack of secondary hæmorrhage.

Dr Barbour asked to what extent Dr Napier supposed cell proliferation had gone on?

The President regarded Dr Napier's paper as conveying a note of wholesome warning. On one occasion he was called to a patient who began to bleed on the 14th day post-partum, and on the 15th day he removed a fragment of placenta without any difficulty. In another case he removed a fragment of membrane which was quite sweet, and there was no indication of anything abnormal save that the patient was making a slow recovery. He was of opinion that however carefully the placenta may be examined one cannot be sure that the uterus is empty, and this can only be determined by a digital examination. He himself now makes it a matter of routine to pass two fingers, well carbolized, round the lower segment of the uterus, and so assure himself of the condition of the organ.

Dr Napier thanked the Fellows for the reception of his paper. He thought, however, that they had missed the main point of it, which was to establish the pathology of the condition. He had anticipated Dr Simpson's criticism as to the introduction of his finger into the uterus. He did not think Prof. Simpson would, in practice, treat a case of seeming secondary hæmorrhage differently from what had been done. Of course, had he known that the polypoid mass was there he should have removed it. The tumour could not have occupied the lower portion of the uterus; he, like the President, assured himself that the uterus was empty of clots. He considered that the point of most interest was the rapid development of this new tissue. In reply to Dr Chapman, he could only say that both Stricker and Dr Woodhead have stated that muscular tissue was present in these masses; but he did not feel himself able to give an opinion as to the amount of such tissue present.

Part Fourth.

PERISCOPE.

MONTHLY REPORT ON THE PROGRESS OF THERAPEUTICS.

By WILLIAM CRAIG, M.D., F.R.S.E., Lecturer on Materia Medica, Edinburgh School of Medicine, etc., etc.

RESORCINE IN THE TREATMENT OF WHOOPING-COUGH.—Dr Moncorvo, of Rio de Janeiro, recommends (*Bull. de l'Acad. de Méd.*, 22nd January) the local application of a one per cent. aqueous solution of resorcine to the glottis by means of a soft brush. He gives a very favourable account of this practice, which is based upon the hypothesis that whooping-cough is caused by a micro-organism, and upon the fact discovered by Dujardin-Beaumetz, that resorcine has a marked action on ferments.—*London Medical Record*, 15th March 1884.

ARENARIA RUBRA FOR GRAVEL AND VESICAL CATARRH.—Under this name *Spergularia rubra*, known as "sabline" in Algeria, has been introduced from that country into the Materia Medica of the new French Pharmacopœia. The attention of the medical profession in France was directed to this little plant in 1878 by Dr E. L. Bertherand, as a remedy for gravel and vesical catarrh. It is used for these complaints in Malta and Sicily. For twelve years a decoction of this plant was sold in Algeria by a Maltese, in the form of a secret preparation. The plant grows abundantly on the sandy shores of Algeria and the shores of the Mediterranean. Water distilled with the plant possesses an ammoniacal odour. The properties which it possesses are supposed to be due to the large proportion of alkaline matter and the resinous aromatic principles which it contains. The dried plant has an odour resembling fresh hay, and yields to ether chlorophyll and a resinous body having the odour of benzoin. Dr Bertherand has used the plant with success in both acute and chronic vesical catarrh, whether purulent or sanguinolent, and finds that in a few days it causes the disappearance of the ammoniacal, putrid, and sometimes intolerable odour of the disease. He has also tried it with success in dysuria, cystitis, and uric acid deposits. In nephritic colic it acts as a prompt and energetic calmative. Dr Boureau, physician at Saint Largave, has also experimented with the plant in cystitis, vesical catarrh, hæmaturia, jaundice, etc. The results which he has obtained have convinced him that this diuretic will certainly prove an important agent in therapeutics. The decoction is the form generally used. It has a slightly saline taste or odour, and is of a reddish yellow colour. The dose is a wine-glassful four or five times a day. An aqueous extract is also prepared, which is taken in doses of 30 grains four or five times a day.—*Midland Medical Miscellany,* April 1884.

CASCARA SAGRADA IN THE TREATMENT OF HÆMORRHOIDS.—Dr F. C. Herr of Philadelphia, in the *Therapeutic Gazette* for May, strongly recommends for hæmorrhoids this bark, in the form of "Cascara Cordial," in teaspoonful doses twice or thrice daily. He says it is found to "exercise a speedy and happy action upon the hæmorrhoidal condition."

AGARICIN IN THE TREATMENT OF NOCTURNAL SWEATINGS.—In Germany, Seifert of Würzburgh is the only one who made observations with this remedy, and published them. Seifert employed agaricin in the treatment of twelve phthisical patients, and reports excellent results. In *Centralblatt für Klinische Medicin,* Pröbsting reports on a number of cases treated with this same drug. It was first employed in 1882 in pill form, in combination with Dover's powder. Dover's powder was given in combination to counteract possible unpleasant secondary effects of agaricin. It was administered according to the following formula:—

℞ Agaricin, . . . gr. vijss.
Pulv. Doveri, . . ʒi½.
Rad. alth. mucilaginis,
M. ft. pil. No. 100.

The largest number of patients at the clinic suffering from profuse night-sweats was treated with the above pills. The result can be summed up as follows:—In most of the cases, after the administration of a single pill (gr. $\frac{1}{15}$) of agaricin, the sweat had disappeared entirely, or was very much diminished, while a second pill in the last-named cases had the effect to permanently relieve the sweating. A few patients were not benefited very much even by gr. $\frac{1}{8}$ doses; in three cases of profuse hectic sweating, given in very large doses, it had no effect at all. Atropine had been given with the desired effect. By comparison, it was determined that gr. $\frac{1}{8}$ of agaricin was about as efficient as gr. $\frac{1}{150}$ of atropine. Seifert claims that the action of agaricin is very slow, therefore recommends that it should be administered at least five or six hours prior to the time that sweating sets in. Pröbsting, on the contrary, not unfrequently observed a very rapid effect. As, for example, in a case where the patient was found in a profuse perspiration at the morning visit. One half hour after the administration of two pills, the attack rapidly disappeared. In a case of acute endocarditis, where the chest was covered with large drops of perspiration, after the administration of two pills the secretion promptly ceased. After the full effect of agaricin had been obtained, its action continued for some time. Its effect on the digestive system was not objectionable; only in two cases the drug was not well tolerated. Young thinks that it produces sound healthy sleep in phthisical patients, and moderates the cough, but this we cannot determine positively. It may act largely, by causing a cessation of the sweating, and from the effects of the opium. We can sum up the action of agaricin about as follows:—When given in doses ranging from gr. $\frac{1}{16}$ to gr. $\frac{1}{6}$ even profuse sweating ceases in phthisis as well as in other diseases. It often acts very promptly. Its action not unfrequently continues for a few days. It seldom causes a disturbance of the digestive system, even when continued for some days. Agaricin is a good substitute for atropine. It is just as active as atropine, and when continued for some time is not so injurious. Agaricin is the active principle of *Agaricus albus*.—*The Therapeutic Gazette*, June 1884.

TREATMENT OF SYPHILIS IN SUCKLINGS.—Link, after quoting the experiments of Labourdette and Dumesnil, which show that in animals twenty-five per cent. of iodine administered passed off in the milk, relates a number of cases tending to show that syphilis in sucklings may be successfully treated by giving iodide of potassium to the mother (*Präger Med. Wochenschrift*, August 8, 1883).—*The Practitioner*, June 1884.

OSMIC ACID IN THE TREATMENT OF PERIPHERAL NEURALGIAS.—Recently, Neuber has injected a one per cent. solution into the parenchyma of obstinate cases of neuralgia. Three patients treated by this method—two with ischial, and one with trigeminous neuralgia, were discharged as cured, after making from ten to twenty-four injections. Twelve cases of neuralgia treated by E. yielded very satisfactory results. The duration of treatment varied in cases, according to the acuteness of the disease, ranging from one to six weeks. The number of injections were three to fourteen. The following is the prescription used for the solution:—

℞ Acidi osmici crystal., . . gr. jss.
Solve in aqua destil., . . ʒijss.

The solution is best made just prior to using, since it decomposes very rapidly, the dose being gr. vijss. of the above solution. This acid causes no unpleasant effects when injected subcutaneously; there is no reaction, but a slight redness at the site of puncture, which passes away in a day or two. If the seat of the disease permits, the injections are best made just over the diseased nerve trunk: osmic acid has a great power of diffusion, therefore when injected in the neighbourhood of the affected nerve it may act by coming in direct contact (*Berliner Klinische Wochenschrift*).—*The Therapeutic Gazette*, June 1884.

CHESTNUT LEAVES IN WHOOPING-COUGH.—Dr Cooperider, of Taylorsville, reports in the *Canadian Medical Record* successful results from the use of fluid extract of chestnut leaves in whooping-cough. The result is observed not only in the relief of the paroxysms, but the active cure in from four to five days. The dose is from fifteen to sixty drops, according to the age of the patient. If the child is old enough, it is given in hot water, as an infusion. To a small child it should be given in a simple syrup or elixir, on account of its taste.—*Therapeutic Gazette*, June 1884.

OCCASIONAL PERISCOPE OF DERMATOLOGY.

By W. ALLAN JAMIESON, M.D., F.R.C.P., Lecturer on Diseases of the Skin, Edinburgh School of Medicine.

TREATMENT OF ACNE INDURATA.—Stelwagon points out that in this form of acne local treatment is especially necessary, and this of an active kind. The first of these is scarification by puncture. These incisions can be very well made with a sharp-pointed tenotome. They should be thorough, and penetrate the full depth of the nodules. Every lesion should be so treated, varying from a single puncture in the small induration to several in those of a larger size. Pus is rarely liberated; but there may be a good deal of hæmorrhage, which should be encouraged by hot-water fomentations, which allay the irritation caused by the punctures. After four or five days the scarifications should be repeated. In the interval a stimulant lotion or ointment may be used on the parts not operated on, and to the whole face if the irritation is moderate. Bathing the face in the evening with water as hot as can be borne for from five to ten minutes should precede the use of the lotion, and proves an excellent adjuvant. In combination with scarification, a 95 per cent. solution of carbolic acid may be used. When the bleeding has ceased, each papule and pustule at the point of puncture is touched with an ordinary match stick, made somewhat tapering, and dipped in the acid. Scars never follow, as they may do when the acid nitrate of mercury is employed, and the result is satisfactory. When the acne indurations are capped with a small pustular centre, the curette may take the place of the scarifying knife. The tops of the lesions are thoroughly scraped out, and a repetition is not often needed. As, however, more irritation is occasioned by scraping than by puncturing, in cases so treated it is advisable to prescribe a mild soothing ointment. Stelwagon has also made use of electrolysis in some cases; and though more painful than scarification, it is not so terrifying, and the result is such as to warrant a further trial. Though external treatment will remove this as well as all other forms of acne, it will not prevent a relapse and the cropping up of new lesions. Constitutional treatment is called for, and a combination of this with external will often effect a permanent cure. Acne indurata seems, in the greater number of cases, to be an expression of a scrofulous diathesis. Among the tonic remedies none stands higher than cod liver oil, iron, preferably the bitter wine of iron, and a preparation of malt. These three remedies should be given separately rather than in combination,—the malt during the meal, the iron immediately after eating, and the oil thirty to sixty minutes later. If dyspepsia is the sole discoverable cause, remedies directed towards a palliation and cure of that condition are to be advised. A good combination, especially if constipation coexists, is one consisting of two fluid drachms each of fluid extract of cascara sagrada, and dilute muriatic acid, and two and a half fluid ounces of the compound tincture of cinchona, a teaspoonful in a wineglassful of water at meal-time. The cascara may be increased or lessened according to the effect produced. Even in dyspeptic cases cod-liver oil, if well borne, should be advised. The dose need not exceed a dessertspoonful.—*Journal of Cutaneous and Venereal Diseases*, February 1884.

ERYTHRASMA.—Balzer describes under this name a parasitic affection of the skin, which he regards as distinct from the eczema marginatum of Hebra. It is an erythema more or less defined, which commonly affects the inguino-crural-scrotal region, is capable of becoming generalized, is accompanied by a certain degree of thickening of the epidermis, which exfoliates in very small scales, and which is produced by the presence in the horny layer of the skin of a fungus whose elements are extremely small, the *microspora minutissimum.* In certain typical cases the diagnosis is perhaps possible by the objective symptoms alone. These are—irregular patches very little elevated, but exactly defined at their margins, presenting a red, grayish, or yellowish coloration, the surface dull, and slightly rough; little scaliness, little itching, no greasiness, and usually of very old date. These characters lead to a probability; for certainty the microscope is indispensable. When the scales are soaked in a solution of 40 per cent. of caustic potass, after being macerated in ether or alcohol, the parasite can in general be easily made out, and the arrangement of the fungus resembles that of the microsporous furfur; that is, one sees aggregations of spores forming isolated groups, round which the tubes wind between the epithelial cells. One is struck by the great abundance of the parasite. Both the mycelium and spores are exceedingly small and fine; but their structure resembles that of the larger parasites. Balzer places it in the class of Schizomycetes, and genus Oidium. The distinction between erythrasma and eczema marginatum consists in the latter being redder, more scaly, more itchy, and with less well-defined margins. The treatment recommended is friction, long continued, with soapy fluids, and the application of such agents as tincture of iodine, nitrate of silver, or pyrogallic acid. To eradicate it, this should be continued one or two months.—*Annales de dermatologie et de syphiligraphie,* Dec. 1883.

FROM the Report of the Hospital for Diseases of the Skin, Belfast, just issued, it appears that of a total of 942 cases treated there last year by Dr Purdon, there were 86 of acne; 255 of eczema; 30 of lupus vulgaris; 89 of psoriasis; and no fewer than 210 of scabies, an extremely large proportion. On the other hand, there was only 1 case of favus.

RESORCIN IN CUTANEOUS DISEASES.—Cattani has used the following ointment in a number of cases of impetiginous eczema of the head and face:—

℞	Resorcin, . .	1·0 to 2·0
	Vaselini, . .	10·0

This, after five or six applications, caused the crusts to dry up and disappear, leaving a rosy spot. Where the crusts are very large, and on being removed show a denuded surface, when this ointment is employed the crusts form again in finer layers and at last disappear. The serous oozing of eczema is also immediately checked by this ointment. He believes that resorcin has a special affinity for the epithelial tissue of the skin, improving its nutrition, modifying new formations, and destroying pathological new cells.—*Journal of Cutaneous and Venereal Diseases*, December 1883.

IODOFORM IN ERYSIPELAS.—Mr Burman records four cases of erysipelas where the disease seems to have been arrested very rapidly by the application of iodoform collodion of a strength of one in ten.—*Practitioner*, May 1884.

COSMETICS.—At one time the process of adornment by means of these consisted in the use of simple preparations, accompanied by much polishing and kneading of the skin,—a process, indeed, more healthful than otherwise. Elder-flower water, almond oil, and bean-flower water are examples of the preparations employed. But this practice did not cover up deformities or remove defects, as freckles, moles, or tan, and stronger preparations began to be sought. Oil of cashew gained a favourable reputation in the removal of sunburn and freckles, but the pain following its use brought it into disrepute. After this the use of corrosive sublimate came into vogue, and rose or elder-flower water was beaten down with bitter almonds, and this drug added in varying proportions. Then came the face powders to cover up deformities, which are largely sold now. In these are incorporated bismuth, calcium, zinc, lead, French chalk, etc. The main constituents of the following are:—

Powders.

Preparation.	Main Constituents.
Pearl white.	Subnitrate bismuth.
Flake white.	Carbonate lead.
Saunders' face powder.	Oxide of zinc.
Complexion powder.	Bismuth subcarbonate.
Riker's face powder.	Carbonate of calcium and zinc.

Lotions.

Preparation.	Main Constituents.
Circassian cream.	Corrosive sublimate.
Kalydor.	Corrosive sublimate and potash.
Milk of roses.	Corrosive sublimate, rose water, and ol. almond.

Enamels.

Laird's bloom of youth.	Oxide of zinc and calcium.
French's grease paint.	Oxide of zinc and calcium.
Gourand's Oriental cream.	Calomel and water.
Hagan's magnolia balm.	Oxide zinc.
Bradford's enameline.	Oxide zinc.
Eugenie's favourite.	Carbonate of lead.
Snow white enamel.	Carbonate of lead.
Snow white Oriental cream.	Carbonate of lead.

—Dr Tuttle in *New York Medical Record,* 8th March 1884.

SUBACUTE ECZEMA.—Reynolds recommends the following ointment:—

℞ Pulv. iodoformi, ... gr. x.-xx.
Zinci oxidi, ... ʒj.
Ung. aq. rosæ vel petrolati, . ℥j. M.
Sig. Apply two or three times a-day.

—*Chicago Medical Journal and Examiner,* March 1884.

TREATMENT OF ACNE.—Piffard in some remarks on this observes that acne never commences, and that relapses never occur without some sufficient cause. He, therefore, who would hope successfully to combat the affection, should at the very beginning seek to unravel the etiological skein, however tangled it may seem to be. If curable gastric, intestinal, uterine, or genital affections are present, and appear to constitute the underlying causes, first attack them. In the internal treatment of acute acne vulgaris, the drug which in the writer's opinion outweighs all others in usefulness is *calx sulphurata,* given in small doses at not too frequent intervals, and discontinued as soon as its good effects appear to be manifest, and resumed as soon as they seem to flag. Next in usefulness is bromide of arsenic, given in doses of from $\frac{1}{100}$ to $\frac{1}{50}$ of a grain. A 1 per cent. solution in alcohol is a very available method of dispensing it, and the dose will be one or two minims (not drops) in a wineglass of water, two or three times a day. If any gastric irritation should arise, the dose should be lessened. It is his custom to use the first mentioned drug in cases of a lymphatic character, the last in those of a more florid type. Both in subacute acne vulgaris and in acne indurata ergot is sometimes valuable. The drug must, however, be employed with a certain degree of caution. It should be given twice or thrice a day, and continued for several weeks.—*Journal of Cutaneous and Venereal Diseases*, March 1884.

INTERNATIONAL MEDICAL CONGRESS AT COPENHAGEN—SECTION OF DERMATOLOGY AND SYPHILIS.—Dr Haslund, president of the section for dermatology and syphilis, has made the announcement that it is proposed after the conclusion of the congress (17th August) to arrange for a visit by the members of the congress to the leprous districts in Bergen in Norway. This will occupy about two weeks; and Dr Armauer Hansen has kindly offered to act as conductor. All members of the congress who propose to take part in this excursion are requested to communicate their intention to Dr Haslund, Copenhagen, before the middle of July. Dr Unna of Hamburg, requests that any medical man who has made any new instrument adapted for dermatological purposes for scraping, puncturing, injecting, epilating, use of spray, or for galvano-caustic electrolytic or optical employment, or who has improved on former instruments, should send specimens or drawings to Messrs Nyrops, instrument makers in Copenhagen, who have offered to exhibit these and to return them. These instruments will be noticed in the *Monatshefte für Praktische Dermatologie*, and in the *Illustrirten Monatschrift der Ärztlichen Polytechnik*, after the congress.

PERISCOPE OF SYPHILOLOGY.

By FRANCIS CADELL, F.R.C.S. ED.

CAN A MAN AFFECTED WITH SYPHILIS COMMUNICATE THE DISEASE TO A HEALTHY FŒTUS WITHOUT INFECTING ITS MOTHER? CAN A MAN BEGET A SYPHILITIC CHILD WITHOUT INFECTING ITS MOTHER?—In the *Philadelphia Medical Times*, 19th April 1884, Dr W. R. D. Blackwood answers these two questions in the affirmative. Some authors agree with Dr Blackwood; others, as Cullerier, Diday, and other continental writers, lean strongly towards the absolute belief that a syphilitic child must be born through an infected mother. A case is related by the author in which Mr A., a young married gentleman, the father of a healthy female child then three years of age, consulted him in May 1878, for a syphilitic sore on the penis, contracted through illicit intercourse. At this time his wife was in all probability pregnant, as she had missed her catamenia. Sexual intercourse was prohibited. In a few days Dr Blackwood saw Mrs A., who was suffering from neuralgia, and as she had lately been troubled with slight sciatica, he embraced the opportunity to prohibit sexual relations as being harmful at present, thus guarding both parties and averting suspicion. Mr A. had constitutional symptoms in six weeks from the appearance of the primary lesion. Unfortunately Mr A. disobeyed the injunctions of his medical attendant, and on two occasions had sexual intercourse with his wife, after the primary sore was healed. In less than a year he was apparently free from constitutional defect, and no suspicion as to what had existed was known to his family or to his numerous friends. The baby, a boy, was born in due time, with marked symptoms of syphilis. In December 1881, Mrs A. was again delivered of a female child after a normal pregnancy. This child was also syphilitic. In the father's family there is no taint of scrofula throughout the three generations now alive, and the family history in the past is good. Dr Blackwood is also certain that Mrs A. could never have contracted syphilis before the birth of these two children. With the history as given above it cannot be reasonably doubted that the fœtus, originally healthy, was infected with syphilis by its father at about the thirteenth week of intra-uterine life. The whole series of events was clearly traced—it is rarely that a more complete history passes under the knowledge of the physician—and hence the author sees no avenue of escape from the belief that a healthy woman (free from syphilis) may conceive and subsequently bear a syphilitic child which became syphilized in utero, and the mother may, notwithstanding this, remain after delivery free from constitutional taint. The author watched Mrs A. closely, and never saw a sign of syphilis.—"Can a man beget a syphilitic child without infecting its mother?" The former instances seem to answer the query affirmatively; but the author desires to present the history briefly of two other families which have been under his care for several years. Mr C. consulted him for an attack of muscular rheumatism, which could only be benefited by iodide of potassium. By this time suspicions of the patient's condition were aroused, and, although he had a son some ten years of age, who was in good health and free from syphilitic taint, there was no doubt that lues venerea was at the bottom of the difficulty. On careful investigation this was found to be the case. About two years after this his wife was delivered of a dead child, absolutely rotten. In two more years she was again delivered under similar circumstances, although the child was not so flabby. In the opinion of three physicians besides the author, *the woman is free beyond doubt from syphilis in any form, and has never had it.* We have thus the history of a woman bearing first a healthy boy, then, through acquired syphilis on the part of the husband, she gives birth to two syphilitic children still-born, and yet she remains free from any discoverable constitutional defect. A third case is presented. Mrs R., a stout, strong, and healthy woman, was attended in four premature confinements, in all of which the fœtus was syphilitic. The husband had contracted syphilis early in life, and is at present well advanced in progressive locomotor ataxia. Despite the fact that the husband is thoroughly syphilized, *the wife is in apparently perfect health.* The three cases noted show, to the author's mind at least, that first, a fœtus carried by a non-syphilitic mother and begotten by a non-syphilitic father *can be syphilized* before birth, and the mother *escape constitutional taint;* and second, that a healthy woman may conceive through a syphilitic husband, give birth to a *syphilitic child*, and, notwithstanding, *escape constitutional taint.*

So long as no authentic case occurs, where a mother is infected with syphilis by her own diseased infant (Colles' law), it can never be asserted that a healthy mother may give birth to a syphilitic child. With regard to the second case, we aver that no physician can state with certainty that a woman has never suffered from acquired syphilis.

CHANCRE OF THE TONSIL.—While it may result from contagion from initial syphilitic lesions about the lips and face, as a consequence of kissing, and also from mediate contagion, as by articles like nursing-bottles, pencils, perhaps cigars, etc., it is also frequently caused by depraved and unnatural sexual contact, which of late years has increased to an alarming extent in America. These lesions are interesting, also, in their diagnostic relations; and further, in the fact that there is little doubt that some cases of the *syphilis d'emblée*, or *larvée* of the French, were really instances of tonsillar infection, since nothing is more assured than that acquired syphilis always begins in a chancre. Dr R. W. Taylor gives several cases of this form of infection in the *New York Medical Journal,* 24th May 1884. A young woman who had been guilty of unnatural practices became infected in the mouth. After a fortnight the tonsil was much reddened, swollen, indurated, and exulcerated. In due time secondary symptoms appeared. Another case, a boy 9 years old, was similarly affected. He stated that he was induced by a strange man to show him the way to a water-closet. The compensation for this information was 5 cents. He said that while in the water-closet he was induced twice to submit to the attention of the man, the evidence of which he had at the time in his throat. A man was also infected on the left tonsil as a result of depraved habits with women. At the time of writing Dr Taylor had under his care a young woman, suffering from a tubercular syphilide, whose syphilis began on the left tonsil. She narrated, with great minuteness, the mode of contagion from unnatural practices with a lover. An enthusiastic medical student, now a physician, when trying to resuscitate an asphyxiated infant by mouth to mouth inflation, was infected on the right tonsil. Dr Taylor's late colleague, Dr Bumstead, narrated to him a case of chancre of the tonsil contracted by a man as a result of an unnatural and beastly practice. Schirajew reports two cases. The first was that of a woman 28 years old. The second that of a mother, whose child was infected by its nurse, who was infected on the left tonsil by the infant. Spilmann reports the case of a woman, of good health and irreproachable habits, whose infection was traced to contact with a nursing-bottle of a syphilitic child. Hulot reports the following cases:—1. That of a married woman infected from a chancre of the mouth of a friend's child. 2. A man, aged 23, could give no account of the mode of contagion. 3. A woman having chancre of the right tonsil caused by kissing her daughter, who had mucous patches on the mouth. 4. A woman, married, 30 years of age, had a chancre on the right tonsil contracted from her daughter, who had one on her neck. C. Boeck gives the details of four cases of tonsillar syphilis, in two of which infection occurred from the use of eating and drinking vessels, and the third from a kiss. In the fourth the origin was not discovered. The diagnosis rests between mucous patches and syphilitic, ulcerated, sclerosed tonsils, in both of which the lesions will not be so sharply confined to one side, nor accompanied by such well-marked adenopathy.

A PERISCOPE OF MEDICINE, CLINICAL AND PATHOLOGICAL.

By G. A. Gibson, M.D.

The Differential Diagnosis of Disseminated Sclerosis (*Sclérose en plaques*).—Charcot gives an interesting paper on this subject. Because of the diffusion of the lesions a great difference exists between it and the affections which Vulpian has designated systematic. In these last the lesions are localized in certain regions, as illustrated in locomotary ataxia and in infantile paralysis, the implication of other regions being purely secondary. Further, in systematic lesions the nerve tissue is primarily affected, and the neuroglia secondarily; while in disseminated sclerosis the reverse of this is what takes place. The phenomena may be cerebral, spinal, or bulbar, and may appear simultaneously or separately. The first spinal symptom is trembling, which is not present when the patient is at rest, but appears when any voluntary effort is made, the trembling becoming greater as the action continues. The trembling of paralysis agitans is the reverse of this; in it the trembling is continuous, and may be checked by voluntary effort. In sclerosis there is also a sort of spasmodic paraplegia of the lower limbs, so that when the foot touches the ground the whole limb becomes rigid, and it is difficult to carry one limb past the other on account of the violent contraction of the muscles. The tendon reflexes are very much intensified. The cerebral phenomena are numerous. The speech is slow and drawling, the words are separated from each other, and certain consonants are difficult to pronounce; this is not to be confounded with the speech of general paralysis. Vertigo often appears early. Apoplectiform or epileptiform attacks occur, as in general paralysis, and, as in this last, are accompanied by an elevation of temperature which serves to distinguish them from cerebral hæmorrhage in which the temperature is lowered. After a time there are psychic changes; memory is affected, and emotion is readily induced. The eye symptoms have been specially studied by Charcot, and one of the most remarkable of these is nystagmus. This is a relatively rare affection in other nervous affections, so that it is all the more important in this condition. The patient does not fixedly regard his questioner as in paralysis agitans, and the absence of fixity is due to inco-ordination of the muscles of the eye. In ataxia accommodation to light is completely lost, but is retained for near and distant objects, and the pupils may be unequal. In sclerosis myosis is the rule, but the contracted pupil contracts still more to light. In ataxia the pearly aspect of the disc is characteristic, while in sclerosis there is simply decoloration of the optic nerve; thus in the first case blindness is absolute, while in the second it may come and disappear frequently. The progress of the disease is by slow stages, and encourages the hope of cure. In some cases a bulbar lesion closes the scene with all the signs of a glosso-labial-laryngeal paralysis. This condition is to be distinguished from the hereditary ataxy described by Friedreich and from locomotary ataxy. Friedreich's disease appears in infancy or adolescence, and in the offspring of neurotic patients: it has none of the disorders of sensation such as the lightning pains, etc., of the ordinary ataxy; in other spinal symptoms the two ataxias are alike. In cerebral symptoms hereditary ataxia resembles multiple sclerosis in the presence of nystagmus, paralysis of the associated ocular movements, and the embarrassment of speech. Thus hereditary ataxia occupies an intermediate place between ordinary ataxia and disseminated multiple sclerosis.—*Revue Médicale*, 5th April 1884.

PERIOSTITIS FOLLOWING TYPHOID FEVER.—Routier divides this condition into three classes—1. As it is subperiosteal only; 2. As it affects periosteum and bone; and 3. As it affects the external surface of the periosteum only. He believes the condition is always induced by some slight injury, either a blow, or even a somewhat violent muscular contraction, and that these slight causes are sufficient in the enfeebled state following upon typhoid fever.—*Le Progrès Médical*, 12th April 1884.

THE PATHOGENETIC CONNEXION BETWEEN DISSEMINATED SCLEROSIS AND INFECTIOUS DISEASES.—Pierre Marie contributes a paper on this subject, illustrated by a case of typhoid fever which was followed by sclerosis, and which occurred in Charcot's clinique. This relationship has also been noted in Germany.—*Le Progrès Médical, loc. cit.*

HYSTERICAL HEMIPLEGIA.—A case of this affection is reported from Charcot's clinique. It affected the right side, and the differential diagnosis was based upon the following facts:—There was no facial paralysis. All the muscles were not affected, as, for instance, the triceps acted while the biceps did not. The tendinous reflexes were not exaggerated as in ordinary hemiplegia, but were less accentuated than in the sound side. The muscles of the trunk were not affected. Sensibility to pricking and heat was lowered in the leg, and abolished in the arm. The muscular sense was abolished in the upper limb, but present in the lower. The temperature of the affected side was lowered.—*Le Progrès Médical*, 15th March 1884.

Paralysie Suggestive.—This is the condition which Russell Reynolds described as paralysis "dependent on idea." The state of the muscles during complete flaccidity has been studied by two of Charcot's residents. The reflexes were exaggerated; the muscular sense was completely abolished; *trepidation spinale* was more marked in the inferior than in the superior limb; there were alterations in the form, etc., of the muscular secussion tracing; the limb was cold, both subjectively and objectively; the prick of a pin produced a zone of redness.—*Le Progrès Médical*, 29th March 1884.

Neuritis in Herpes Zoster.—Dubler has recently studied the nervous changes in two cases of herpes zoster, and publishes an interesting account of the result of his investigations, prefaced by a brief historical sketch of the opinions held by physicians regarding the disease since the days of Mehlis, who first suggested the possibility of a connexion between herpes and some nervous change. In both of Dubler's cases the herpes was idiopathic, and the patients were cut off by phthisis in the one case and renal disease in the other. In the former case there was neuritis of the intercostal nerves caused by periostitis of the ribs, and spreading into the finest cutaneous and muscular branches, but not involving the spinal ganglia. In the other case there was disease of the spinal ganglion, of the ninth right intercostal nerve, of the nerve roots, and of the nerve itself; the tenth nerve was also affected, but the roots and ganglion were normal, as was the rest of the nervous system. In both patients there was fatty degeneration of the muscles supplied by the nerves affected.—*Archiv für pathologische Anatomie und Physiologie und für klinische Medicin*, 5th May 1884.

Changes in the Nervous Apparatus of the Alimentary Canal in Pernicious Anæmia and General Atrophy.—From an elaborate study of this subject Sasaki concludes that it is highly probable that the gastro-intestinal form of pernicious anæmia is dependent on definite changes in the anatomical structure of the alimentary canal. Pernicious anæmia is the result of a digestive atrophy, and the corresponding changes of the nervous apparatus of the canal are of the nature of parenchymatous degeneration. On account of the localization of the affections, the nervous changes are also strictly confined to the region of the changes.—*Archiv für pathologische Anatomie und Physiologie und für klinische Medicin*, 5th May 1884.

PERISCOPE OF STATE MEDICINE.

By James Allan Gray, M.A., M.D. Edin., F.R.C.P.E.

Detecting Trichinæ in Meat.—Slices, two or three millimetres in thickness, are taken from several different parts of the meat to be examined. The pieces are preferably taken from the surface of the muscular portion of the meat. A series of thin sections are made of each of the pieces, and these are all plunged into a solution composed of methyl green 1 gramme, distilled water 30 grammes. After about ten minutes' maceration the sections are taken out, and placed to decolorize in a large vessel filled with distilled water. They remain there about half an hour, the water being agitated and changed two or three times. Finally, the water having become quite limpid, it is stirred up with a glass rod, interposing the vessel between the eye and the light, when sections containing the trichinæ are distinguished quite readily with the naked eye. The trichinæ appear in the form of small elongated particles, of a fine blue colour. The methyl green becomes fixed to the cysts of the trichinæ with greater tenacity than to other parts of the tissue. It suffices then to examine the sections with a magnification of fifty diameters to distinguish the worm, which will be found in the cyst. If, in following this method, no trichinæ are found, it is positive assurance that the meat is not infected with them.—*The American Microscopical Journal.* Quoted in the *Sanitary Record*, April 1884, p. 499.

On Copper in Food.—Gustav Bischof, commenting in the *Sanitary Record*, 14th January 1884, p. 353, on the notes of Mr Kingzett anent the above subject in the December issue of that Journal, doubts whether some of the conclusions which Mr Kingzett apparently invites can be accepted without reserve. Let it be granted, says Bischof, that the experiments of Dr B. H. Paul and Mr Kingzett (which, however, were not long enough continued to be conclusive) show that a large amount of copper passes out of the system. What, he asks, is the action of the copper which is not eliminated? This question has not been settled at all. Then, again, even if copper in such foods as preserved peas is harmless, what may be the effect of small quantities of metallic poisons introduced into children through metallic impurities in the preserved milk and other preparations which are given as substitutes for the mother's milk, and which constitute, more or less, their sole food? Bischoff counsels manufacturers to substitute pure tin for lead, and copper thickly coated with tin for copper only; and to enable them to test their preparations, he gives his method of examining for impurities. He first determines colorometrically the precipitate got by sulphuretted hydrogen in the incinerated and otherwise condensed sample. Then he dissolves the precipitate in a few drops of nitric acid, washes into a small porcelain crucible, evaporates to dryness, and heats gently. After cooling, one drop of sulphuric acid and two or three of distilled water are added, when two platinum wires, connected with a galvanic battery, are passed into the liquid. This affords an exceedingly delicate way of qualitatively confirming the nature of the precipitate, as the film deposited on the point of the negative wire may even be examined under a magnifying glass.

NOTES ON SOME SUSPICIOUS CASES OF COPPER POISONING.—Mr G. H. Fosbroke, S.Sc.C. Cambr., calls attention to his investigation of a series of outbreaks of diarrhœa which happened in union workhouse. "The symptoms of the illness complained of were lassitude, headache, constant thirst, disagreeable taste in the mouth, loss of appetite, vomiting of green matters, purging more or less severe, the stools being dark coloured, pain in the stomach and bowels of a crampy character, and in some cases general throughout the body, coldness of limbs, great exhaustion, and convulsions in one or two instances. Jaundice was well marked in a child who died." In the course of the inquiries it very soon became evident that the different illnesses commenced either during the evenings, or in the course of the nights of Wednesdays and Saturdays. After eliminating all possible sanitary defects, which, however, were not very grave, the illnesses still continued. Further inquiries disclosed the facts, that these inmates who had suffered from the symptoms mentioned above had partaken of soup which was prepared in a copper furnace. Examination of this furnace showed it to be devoid of a characteristic metallic appearance, and to be covered with incrustation to a great degree. Thorough cleansing of the furnace at once put an end to the attacks.—*Sanitary Record*, April 1884, p. 484.

DETECTION OF STRYCHNIA.—E. E. Sundvik (*Finska läkaresällsk. handl.*, xxv. 3 s. 145, 1883) gives the results of his examination of a case which had been buried for six months, but which was exhumed on account of a suspicion referring the cause of death to strychnia poisoning. The stomach and its contents were digested with hydrochloric acid, the mixture filtered, and the filtrate dried and extracted anew with alcohol. The method of separation practised was that of Rodgers and Girdwood, as detailed in Fresenius (*Anleitung zur Qualitativen Chemischen Analyse*). After further purification of the chloroform extract obtained by this process, the presence of strychnia could readily be demonstrated by Otto's method in one-sixth of the resulting residue. Verification of this was obtained by dissolving a small quantity of the extract in dilute hydrochloric acid, and injecting it into two frogs, both of whom were seized with characteristic strychnia tetanus, and died therefrom.—Schmidt's *Jahrbücher*, Band. 199, No. 7, p. 20.

Note.—Walter Berger, who extracted the above case from the

Scandinavian periodical in which it appeared, calls attention to the fact that the whole quantity of the contents of the stomach could not have exceeded 50 g. (1¾ oz.), and consisted of a half-dried mass of a highly albuminous material, which is specially liable to fix such a poisonous substance; and as strychnia is virtually indestructible through putrefaction, it might have been possible to detect the poison in a still smaller quantity of material. In this connexion it is worth while to remember that while strychnia has been detected after years of exposure to putrefaction, it has on other occasions eluded the detection of extremely expert medico-legal chemists, even in cases where there can be no reasonable doubt of its having been the cause of death.

A CASE OF POISONING BY THE INGESTION OF TAINTED MEAT.—A curious case of illness happening in the person of Dr Charles A. Cameron, the medical officer of health of Dublin, and attributed to the eating of tainted meat, is recorded by Dr J. Hawtrey Benson. Whatever be the opinion as to the diagnosis in this case, whether the attack be held to be due to the action of toxic alkaloids or to the passage of uric acid, the clinical history is recorded at length in the *Dublin Journal of Medical Science*, March 1884, p. 226, and may be there read.

THE SANITARY USE OF PERFUMES.—How far perfumes can be of use in this way is a matter of some dispute. A lecture on this subject was delivered some time ago by Mr Eugene Rimmel, in which he stated that certain essential oils produce peroxide of hydrogen, which, when in contact with the atmosphere, "disengages ozone—the great air purifier." To the latter part of this statement Mr Kingzett takes exception, maintaining that although certain essential oils, when exposed to the atmosphere, certainly give rise to the production of peroxide of hydrogen as one of several products, in no case, nor in any circumstance, is ozone produced in this way. Mr Kingzett also holds that ozone, as a constituent of the atmosphere, is only produced during certain electrical phenomena, and that its sanitary importance is insignificant in comparison with that of peroxide of hydrogen. Further, that peroxide of hydrogen, along with thymol (itself a volatile camphor) and other substances, are all derived from the atmospheric oxidation of essential oils, and that these together give to the pine and eucalyptus forests their health-giving properties. Turpentine, according to Mr Kingzett, is the essential oil which, better than any other, yields the products just referred to, but terebene (which is turpentine altered chemically by sulphuric acid) is not acted on by oxygen in the same way, and so generates neither peroxide of hydrogen nor ozone. Its activity is confined to its pleasant odour. Mr Rimmel claims that his aromatic ozonizer (sawdust impregnated chiefly with eucalyptus oil) forms ozone, but this Mr Kingzett denies. It forms, says the latter, peroxide of hydrogen, but not in the same proportion in which that substance would be produced by turpentine and sawdust. With "sanitas" it is different, since the preparations to which that name has been given consist of the products of oxidation.—*Sanitary Record*, April 1884, p. 493.

PERISCOPE OF LARYNGOLOGY AND RHINOLOGY.

By G. HUNTER MACKENZIE, M.D., and J. MAXWELL ROSS, M.A., M.B., F.R.C.S.E.

WE extract the following from the Report of the Throat Department of St Thomas's Hospital for 1882, by Dr Felix Semon.

THE CURABILITY OF CHRONIC GRANULAR PHARYNGITIS.—The curability of this affection depends upon the cause in each individual case. The cause may be local, such as irritation from smoking, or general, as in general plethora or anæmia. The disease frequently manifests itself amongst women at the climacteric period, and tends to spontaneous disappearance.

THE INDICATIONS FOR UVULOTOMY.—This operation is too frequently practised in this country. One patient, before applying at St Thomas's, had his uvula cut for dysphonia depending upon paralysis of the left recurrent laryngeal nerve from aneurism. The operation is rarely required, and frequently fails to ameliorate the symptoms, whilst the pain experienced after it is frequently very severe.

SALICYLATE OF SODA IN ACUTE TONSILLITIS.—The use of this drug in large doses in cases of acute tonsillitis, with rheumatoid symptoms, failed to produce any effect upon the disease.

HÆMORRHAGE AFTER TONSILLOTOMY.—In one case—the first in an experience of several hundred cases of tonsillotomy—serious arterial hæmorrhage occurred. After the unsuccessful use of several remedies, the bleeding, which came from the recess between the palatinal arches on the left side, was stopped by direct digital pressure applied to the bleeding point. The bleeding was probably due to a lesion of a branch of the tonsillar artery.

ISOLATED ANÆMIA OF THE LARYNX: A VALUABLE DIAGNOSTIC SIGN IN THE EARLIEST STAGES OF PHTHISIS.—This plays the *rôle* of a warning precursor of pulmonary phthisis, being present at a time when most careful examination fails to detect any signs of mischief in the chest.

IODOFORM AS A LOCAL REMEDY IN LARYNGEAL PHTHISIS.—In two cases iodoform had a curative effect, so far as the laryngeal ulcers were concerned. Two grains, twice daily, by insufflation, is the usual amount administered. The opinion of Fränkel is quoted to the effect that iodoform has a certain favourable influence upon tubercular ulcers of the larynx, but does not cure the disease.

MOTOR PARALYSES OF THE LARYNX.—The abductor fibres of the recurrent laryngeal nerve possess a proclivity to become affected sooner than the adductor fibres, or even exclusively, in cases of undoubted central or peripheral injury or disease of the roots or trunks of the spinal accessory, pneumogastric, or recurrent laryngeal nerves. Neither aphonia nor dyspnœa may be present in such cases. Paralysis of the adductor of the vocal is much more common and less serious than paralysis of the abductors, and is generally functional in character.

ISOLATED TERTIARY SYPHILIS OF THE TRACHEA.—Two instances of this rare disease are narrated.

CONTINUOUS WATERY DISCHARGE FROM LEFT NOSTRIL IN A CASE OF OPTIC NEURITIS.—One of the most interesting points about this case is that anterior and posterior rhinoscopy failed to throw any light upon either the cause or the source of the discharge.

TREATMENT OF HAY-FEVER.—As this disease most commonly occurs in persons of nervous temperament, Dr Morell Mackenzie recommends the administration of nerve tonics and other constitutional remedies. He has found a combination of valerianate of zinc (1 grain), with compound assafœtida pill (2 grains), the best remedy both as a prophylactic and as a means of direct treatment. Opium or belladonna may be given at the same time. As a local application to the eyes, he recommends a lotion of acetate of lead (2 grains), with dilute acetic acid (2 drops), to an ounce of water.—*Hay-Fever: Its Etiology and Treatment.* By Morell Mackenzie, M.D. Lond.

CHRONIC NASAL CATARRH.—Three forms must be differentiated —1. Simple chronic rhinitis; 2. Hypertrophic rhinitis; and 3. Atrophic or fetid rhinitis. The treatment necessarily varies according to whichever of the above conditions is present. In most instances the anterior and posterior nasal spray is of service, with some alkaline cleansing solution, followed by an antiseptic. For the latter purpose "Listerine" is recommended, this being a preparation containing the essential antiseptic constituents of thyme, eucalyptus, baptisia, gaultheria, and mentha arvensis, in combination. The prognosis in the third form is highly unfavourable, and the most that can be done for the patient is to mitigate his urgent symptoms.—*Chronic Nasal Catarrh.* By George M. Lefferts, M.D.

MEDICAL PERISCOPE.

By Francis Troup, M.D.

Fatal Case of Poisoning by Arseniuretted Hydrogen.—A powerful man, æt. 43, a worker in an aniline manufactory, was superintending a boiling cauldron containing zinc, nitric acid, and aniline. A sudden effervescence of the liquid took place, gases were disengaged which the patient supposed he had inhaled, and he immediately felt unwell; he went to bed and had severe rigors, pains in the head and region of the kidneys, and repeated attacks of vomiting. During the night a tolerable quantity of brownish-black looking urine had been passed. Examination elicited little else essentially abnormal than considerable sensitiveness of the renal regions; the axillary temperature was 38°·5 C., the pulse 88, and respiration free. Patient complained of slight stupidity, but gave clear and intelligent answers to all questions. Next day a high degree of jaundice was present; patient declared himself better, but had vomited repeatedly, and had passed very little urine; liver and spleen were somewhat enlarged. Almost complete anuria now set in, the daily average urine being 5 cubic centimetres; its colour was less dark, but it was still coagulable by heat, contained no blood corpuscles, but there were crystals of hæmatin. The icterus disappeared gradually, and liver and spleen retreated to normal dimensions; patient seldom vomited. Temperature and pulse were normal, or nearly so, in the latter days. Sensorium became more implicated, never actual unconsciousness, only slight delirium, and patient had, as it were, to shake himself up to answer the sharply put questions which were addressed to him. On the fifth day slight twitchings of the muscles of the forearms were noticed, which continued till death, and on the eighth active contractions of the facial muscles appeared, but soon ceased. The treatment was chiefly as follows:—Fomentations, bland diet, seltzer water, and, in consideration of the persistent anuria, acetate of potass and derivation to the intestinal canal by large doses of calomel and castor oil. Warm baths and warm packing were latterly used, and acted beneficially on the subjective condition of the patient as to restlessness and muscular twitchings. During the whole course of the illness no symptoms directly threatening life had cropped up; the hæmoglobinuria, and particularly the anuria, were the things which gave a character of gravity to the disease, which ended fatally on the ninth day with general convulsions. The sectio, which could not be made till sixty hours after death in consequence of legal formalities, gave a negative result. The body was so putrid that the structure of organs could not be recognised. The liver was firm and not enlarged; the kidneys were quite decomposed and black, and the spleen diffluent. A black-brown fluid exuded from nose and mouth, and both pleural cavities contained an abundant bloody extravasation. The bladder was empty. Professor Fresenius found traces of arsenic in the liver, but he could not determine its quantity.[1]—*Berlin Klin. Wochensch.*, 1884, No. 8.

SURGICAL TREATMENT OF THE LUNG.—Professor Krönlein, of Zürich, reports a case of resection of the chest wall for recurring sarcoma, in which it was found necessary to remove a portion of lung. In his introductory remarks he quotes a Göttingen surgeon, A. G. Richter, of the beginning of this century, as asking, "Why should lung abscesses not be opened externally?" and answering his question by saying that "it has been done successfully by B. Bell." This was in 1812; and the Professor thinks it only an act of historical justice, now when operative surgery has made such strides, to mention what services earlier investigators have rendered. Till very lately a malignant tumour originating in the chest wall, penetrating the pleura costalis and implicating the lung, was counted a *noli tangere* for the operator; and if, in ignorance of those deep connexions, operative proceedings had been begun, very likely they would have been left off unfinished. Twenty years have not yet elapsed since Billroth made the statement, that "resections of ribs on account of tumours in or on them should be limited to a few exceptional cases," and if it were necessary to open the pleural cavity simultaneously, then such operations were to be looked upon as "curiosities unworthy of imitation." But now the man to whom we owe extirpation of the larynx and resection of the stomach would not hesitate to remove a rib tumour, even if he knew that to do so radically would entail opening into the pleural cavity and cutting out some portion of diseased lung. To-day such an operation is something more than a curiosity; it is not only justifiable, but may even be urgently indicated, and Prof. Krönlein hopes that such an estimate may be formed of his case. On 19th June 1883, a hitherto healthy girl presented herself at the clinique, desiring to get rid of a tumour which, when noticed eight months ago, was of the size of a walnut, on the left side of the thorax, in the body of the sixth rib, just where the axillary line intersected it. Without causing much discomfort the swelling had slowly and equably increased, and was now as large as a child's head. It felt firm, and was solidly fixed to the rib. The skin over it was movable, and the axillary glands were unaffected. The diagnosis made was a sarcoma of the rib, and extirpation followed on the 23rd. 9 ctms. = 3½ inches of the rib were resected, owing to suspicious appearance of the bone, and the costal pleura was unwounded. Healing took place by first intention, and patient was dismissed in the best of health on 20th July. Microscopic examination showed the tumour to be a small celled sarcoma. The patient returned on 10th December, as she had observed above the scar of the operation wound a new swelling, and suffered besides from pains in left side and shoulder, and was somewhat breathless. The left chest was now somewhat shrunk, and the vertebral column correspondingly scoliotic, in consequence of the previous operation. A small, non-protuberant swelling, covered by unattached skin, was now to be felt; it seemed to be seated on the fifth rib, and had no distinct boundaries. For the rest, examination of the chest organs gave a negative result: pure vesicular breathing, no pleuritic friction, no dulness. On 14th December operation was performed again. An incision 15 ctm. long ran above the old scar, and parallel to the course of the fifth rib. After the skin had been reflected from the swelling, it was seen to fill the space which had been left by the former resection. The free ends of the sixth rib were lost in the tumour, which extended above to the fifth and below to the seventh rib, and, as appeared during the progress of the operation, not only involved the whole wall of the thorax inclusive of the pleura, but also projected into the pleural cavity to the size of a small fist. There was, therefore, nothing else to be done than to remove the whole chest wall between the fifth and seventh ribs in a space equal to the palm of the hand; in doing this a piece 3 ctms. long was again removed from each end of the sixth rib. This free opening into the pleural cavity now revealed the lower lobe of the lung and its pleura adherent to the tumour. The adhesions were separated, without much bleeding, by the fingers, whereupon the whole lung immediately collapsed. The view into the chest cavity was now a very free one. The whole retracted lung, the exposed pericardium, and the left half of the diaphragm were visible—this latter in violent action owing to the dyspnœa which followed the pleural opening. Chloroform narcosis was now stopped. It had been noticed, while separating the lung adhesions, that in the lung itself, close to its under border, and immediately under its pleura, a sarcoma the size of a walnut had its seat. This was seized with forceps, drawn up to the level of the chest wound, and, together with a zone of healthy lung tissue, removed by scissors. The edges of the lung wound were united by catgut sutures, the pleural cavity washed out with a one-third per cent. salicylic solution, the large skin wound brought together by numerous silk sutures, two drainage tubes of largest calibre inserted into cavity, and bandaging with iodoform gauze and salicylic wool completed the dressing. The course of the case was so satisfactory, that in three weeks with four dressings the wound was found cicatrized, and patient was dismissed cured, January 14th, 1884. What caused great surprise was the minimum discharge from the pleural cavity, and the rapid expansion of the collapsed lung, which was inferred from the equally rapid disappearance of the pneumothorax. The body temperature only twice of an evening rose to 38°·2 C., and the frequency of the pulse and respiration, which immediately after the operation reached 140 and 60 respectively, steadily sank to normal, which point was attained in fourteen days. On dismissal of patient, auscultation gave pure, somewhat weakened vesicular breathing, and percussion a lessened sonorousness within the area of operation, which area was moderately retracted each inspiration. Professor Krönlein thinks that, looking at the recent experiments in this direction made on animals by Gluck, Bloch, and Schmid, clinical experience has at least overtaken experimental investigation in the domain of lung-resection which, although a modern operation, is yet one which already has a history.—*Berlin Klin. Wochenschrift*, 1884, No. 9.

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[1] In Christison's work on poisons two cases of this kind are related at some length; in one, half a cubic inch of the gas caused severe symptoms, which were only recovered from in seven weeks; in the second, death took place on the seventh day, with symptoms substantially the same as narrated above—shiverings, vomiting, jaundice, somnolency, and bloody urine. *Post-mortem*—The same bloody serum was found in pleural cavities. In other related cases, as in this one, the gas seems to have been formed through using impure arsenic—containing zinc or acid, or both.

PERISCOPE OF GYNÆCOLOGY AND MIDWIFERY.

By J. MILNE CHAPMAN.

ON THE MANAGEMENT OF THE THIRD STAGE OF LABOUR, AND THE CAUSES OF PUERPERAL FEVER (Dyhrenfurth, *Archiv f. Gynäk.*, xxii. 2).—This paper is written in opposition to the views of Ahlfeld, and is founded on a consideration of 261 consecutive labours which occurred in three years, in the midwives' department of the Breslau Maternity. Ahlfeld recommended a purely expectant line of treatment during the third stage, while the writer practised the Dublin method, or the Spiegelberg method, as he calls it, which consists in maintaining the uterus in a state of contraction right on after the birth of the child till the placenta is born; and in the event of the placenta failing to leave the vagina, in applying slight traction to the cord with, if necessary, two fingers passed up to its insertion to aid in directing the force. He shows that hæmorrhages were more frequent in Ahlfeld's cases than they were in his own, and that retention of portions of membrane were at least as frequent in the one case as in the other. In regard to the retention of portions of membrane as being a cause of puerperal fever, he, while fully admitting the fact, thinks, and uses his cases to prove, that Ahlfeld has laid too much stress on its importance.

IS THERE A FORM OF PUERPERAL BREAST INFLAMMATION WHICH IS THE RESULT OF MILK RETENTION (Kustner, *Ibid.*)—The writer first gives the opinions of various authorities as to the causation of breast inflammation. 1st, Billroth, Winckel, Klob, and Kaltenbach, regard all the cases as being inflammation of the connective tissue of the glands spreading inwards from fissures and cracks of the nipple, while the retention of milk they regard as being a secondary phenomenon, and the occurrence of epithelial suppuration they deny. 2. Spiegelberg holds that infection may spread in through the milk ducts, and thus cause infiltration of the gland tissue itself and suppuration. 3. Schrœder supports the retention theory, and the transformation of milk into pus. The writer states his opinion that the great majority of the cases are in their nature phlegmonous, and that they arise in the manner described by Billroth, but that occasionally retention inflammation happens, and of this he cites four cases. It is met with in women who do not nurse their children, or only partially do so, and whose nipples are healthy, and it is characterized by little fever, little pain, little redness, and little pain on pressure. The swelling is limited, and for its treatment only a small opening is required, and disinfection is unnecessary, as there has been no infection.

EXPERIMENTS ON THE PASSAGE OF THE BACTERIA OF CHARBON FROM AFFECTED ANIMALS INTO THEIR MILK (Chambrelent and Mossons, *Archiv de Tocologie*, Feb. 1884).—As a result of three experiments, the writers conclude that in animals affected with charbon, the characteristic bacteria find their way into the milk, and that a culture of the milk when injected into healthy animals reproduces the disease.

THE ETIOLOGY OF OPHTHALMOBLENORRHŒA NEONATORUM, (Zweifel, *Archiv f. Gynäk.*, xxii. 2).—After discussing the various theories held on this question, and showing their great diversity, the writer asks himself the question whether the disease can ONLY be produced by contact with a specific germ,—the gonococcus of Neisser,—or if simple catarrhal vaginal secretion, that is normal lochial discharge, may produce a blenorrhocic conjunctivitis. Taking for granted that a negative answer to the latter question would warrant a positive one to the former, he determined on the very bold procedure of experimenting on infants—bold, because he himself was so confident that he would only get negative results that he felt warranted in making the experiments. The vaginal secretion he obtained from patients in his private practice, the children he made use of were those of hospital patients. His results in all six cases were absolutely negative. At the same time he had the secretion of each case used carefully, examined microscopically, and while there were a few micrococci present, there were none of those described by Neisser as characteristic of gonorrhœa. He cautions those who may repeat his experiments in regard to the selection of cases from which to take secretion. He advocates Credé's prophylactic treatment in all hospitals, and in any case where there is a suspicion of gonorrhœa being present.

RUPTURE OF THE VAGINA DURING LABOUR (Schneider, *Ibid.*)—A case is described where the labour under the charge of a midwife was normal, but where it was found impossible to remove the placenta, either by expression or by traction on the cord. A doctor was called in, who removed the placenta by passing his hand into the uterus, and he then discovered a transverse tear at the junction of the vagina and cervix behind. The writer then saw the case, and he found that the peritoneum behind the tear was intact, but that it was forced upwards by an accumulation of blood-clots and air. A piece of carbolic gauze was passed into the tear after removing the blood-clots, and the vagina was subsequently frequently douched. Recovery was perfect. Another case of the writer's is recorded in which the cephalotriptor was employed. The first case he describes as spontaneous, the second as traumatic, and he attributes the successful issue of his first case to the non-implication of the peritoneum.

THE IRRIGATING CURETTE (Rheinstaedter, *Centrbl. f. Gynäk*, 1884, No. 3).—The instrument described by the author consists of a spoon-shaped curette, which is perforated throughout its entire length, in such a manner that a current of fluid may be kept up through it while it is being used in the body. He concludes by giving the following precautions:—1st, Washing out of the uterus should only be done when the upper part of the body is raised. 2nd, To prevent the entry of air while using his instrument, care should be taken to have a current of fluid flowing through it before it is passed into the uterus. 3rd, During its uses, the forefinger of the left hand should hold the cervix open to permit of free outflow. 4th, Should the patient show signs of sudden collapse, or should the outflow cease, the injection should at once be stopped.

TWELVE CASES OF PORRO'S OPERATION (Carl Braun von Fernwald, *Wiener Med. Wochenschrift*, 1883, Nos. 45, 46).—Of these twelve cases five have previously been reported. All were undertaken on account of great contraction of the pelvis, 8 at the natural time of delivery, and 4, the last 4 cases, before labour had set in. Of the children, 11 were living, 1 dead. Of the mothers, 8 recovered, 4 died. One of the 8 died on the 43rd day of double catarrhal pneumonia. In 6 of the successful cases recovery was free from fever. The method of operating he recommends is by a long abdominal incision and opening the uterus after it has been projected outside the abdomen. He treats the pedicle extraperitoneally, securing it in a clamp and searing it. In one case where, on account of deficiency of cervix tissue, he was tempted to try the intraperitoneal method of treatment, a fatal result occurred from hæmorrhage and peritonitis. The portion of uterus within the hold of the clamp he often found come away as early as the 10th day.

A FOURTH CASE OF PORRO'S OPERATION (Fehling, *Centralblatt f. Gynäk.*, 1884, No. 2).—The operation was undertaken on account of osteomalacic distortion of the pelvis, the available conjugate being much under 2¼ inches. When the case was first seen, the right arm was found in the vagina. On attempting to return it, the writer found a tear in the vagina, and while examining this a hæmatoma of the small labium occurred, which rapidly burst.

Both these bled freely, and recourse was had to tamponading. She was then removed to the hospital, and the operation performed. The result was favourable to both mother and child. The writer then recapitulates three of his cases, and of his four only one was fatal, while all the children were saved.

SURGICAL PERISCOPE.

By A. G. Miller, F.R.C.S.E.

Excision of the Shoulder-Joint.—Mr Stokes of Dublin, in a paper read before the British Medical Association at the last meeting, quotes a statement from Mr Holmes to the effect that excision of the shoulder-joint is not so satisfactory as "natural anchylosis." With this statement Mr Stokes does not agree. On the contrary, his opinion is that there is "less shock, difficulty, hæmorrhage, risk of wounding important nerves, and a greater probability of obtaining a freely movable false joint, than after any other similar operation." Mr Stokes thus explains the difference of opinion between himself and Mr Holmes—"The remarkable change for the better in the results now obtained is undoubtedly due to the abandonment of flap-methods of operating, to the adoption of the Ollier or Langenbeck-Ollier line of incision, to antisepticism, promoting thereby rapidity of union; and lastly, and perhaps as regards the ultimate result most important of all, to the early commencement of passive movements, exercises of the arm, and shampooing, which so materially aid in preventing the formation of fresh internal adhesions, and promoting restoration of muscular power." Curiously enough, in the last edition of Holmes's *System of Surgery* (vol. iii. p. 741) we find the following:—"Mr Stokes of Dublin tells me that he has excised the shoulder-joint subperiosteally in two cases, and saw no superiority in the results to those of the ordinary operation." These words occur at the termination of a discussion of Ollier's method of operating. It is not, therefore, the subperiosteal part of the operation, but the line of incision on the anterior aspect of the joint, that Mr Stokes considers important. In this we entirely agree. We can also understand why Mr Holmes does not think so favourably of excision, for he recommends the external incision through the deltoid. At the same time, we consider that Mr Holmes is not far wrong in directing attention to the wonderful amount of mobility that is often acquired in cases of anchylosis. We cannot, however, go the length of believing with him that "in anchylosis no cutting operation is justifiable" (*System of Surgery*, *loc. cit.*) Neither can we altogether agree with Mr Stokes that the operation in all respects surpasses every other similar operation, for certainly nothing could be better than the operation of excision of the elbow, as now generally performed by one incision, in simplicity and good results. Mr Stokes gives two successful and very satisfactory cases. He gives the following conclusions at the end of his paper:—"1. The operation should be performed by the Ollier-Langenbeck method, avoiding, however, in pathological resections, periosteo-capsular preservation. 2. The excision of bone should be as limited in amount as is compatible with the removal of disease. 3. Preservation of the periosteum is only indicated in traumatic resections, where there is much involvement of the shaft of the humerus. 4. The use of splints is not indicated in the after-treatment of resection of the shoulder-joint. 5. Rapidity of union is strongly indicated after this operation, and can best be obtained by a rigid adherence to Listerian antiseptic practice. 6. Passive movements, gymnastic exercises, and massage, should be commenced as soon as possible after the operation. 7. The statistics of the operation, whether done for traumatic or pathological, suppurative or non-suppurative lesions, are eminently satisfactory and encouraging."—*British Medical Journal.*

RESECTION OF ANKLE BY ARTIFICIAL POTT'S FRACTURE.—Mr H. C. March, surgeon to the Rochdale Infirmary, read a paper on the above subject before the British Medical Association at the last meeting. "A boy aged 8 was admitted into the Rochdale Infirmary in April 1882. He had been under treatment elsewhere for three years, for disease of the left ankle. There were two sinuses, one by the inner malleolus, and the other over the head of the first metatarsal. The joint was greatly thickened; and, by means of the probe, diseased bone was felt in the articular faces of the tibia and the astragalus. The patient was watched and fed up, to cancel, as far as possible, his highly strumous condition, till July 26th, when the following operation was performed under chloroform, with full antiseptic precautions:—1. A transverse incision was made over the fibula, about an inch and a half above the external malleolus, exposing the bone, beneath which a chain-saw was passed, and the fibula was cut almost through. 2. A long, crescentic, cutaneous incision was made across the inner aspect of the joint, below the tip of the internal malleolus. The skin-flap was dissected upwards, and, with a Hey's saw, the malleolus was cut through, from without inwards, on a level with the base of the tibia. 3. The foot was then forcibly everted, fracturing the partially divided fibula, and the interior of the joint was fully exposed. Finally, a quantity of diseased bone was removed from the astragalus and the base of the tibia, the joint well syringed with carbolic lotion, a drainage-tube inserted, the skin drawn together with wire sutures, and the limb placed in a box-splint with antiseptic dressings. The result was entirely satisfactory. It will be seen that the operation is a copy of nature, an artificial Pott's fracture. The advantages of such an operation are, that while it thoroughly opens the joint, it divides neither tendon nor ligament, injures no artery or nerve, and removes no structures but those that are diseased. It is an operation that presents no difficulty, and the only point needing care is to divide a sufficient length of skin across the hinder, inner, and front part of the ankle. When recovery has taken place, and the malleoli rapidly unite, the joint is as strong and its movements as free as ever." The operation was a good one, and creditable to Mr March, as the result proved, though the method of procedure hardly bears out the title given to the paper.—*British Medical Journal.*

HERNIA.—The *British Medical Journal* for the 10th Nov. gives three articles on hernia, by Dr J. Walton Browne of Belfast, Dr Joseph H. Warren of Boston, and Mr R. N. Pughe of Liverpool. Dr Browne gives an account of his own experience and practice in strangulated hernia. Dr Warren, a well-known American authority, who has published a large book on the subject, takes as his theme the so-called radical cure. He advocates operative measures as better than the application of mechanical means. He considers that "the time is not far distant when it will be considered that one who does not operate in some way for such cases has neglected his bounden duty to his patients, and must be held accountable therefor." He seems to ground this statement on the fact that trusses often do not accomplish the end for which they are intended, but, while (in adults) they never cure, may, if inefficient, even aggravate the sufferings of the patient. We do not agree with Dr Warren, for we have often seen patients with well-fitting trusses who were almost as comfortable as if they had no rupture. But we do agree with him when he says that surgeons should always superintend the adjustment of the truss in every case which they send to the instrument-maker to be fitted. Ignorant persons may suppose that when they have got a truss they are all right, however uncomfortable or ineffective it may be. But we must say that our experience has been that patients have always been very ready to complain if their trusses were wrong. The operation which Dr Warren recommends for radical cure is as follows:—"An incision is first made, much the same as in the operation of kelotomy, except that it is longer. The superficial integuments are now retracted, and the rings exposed to view. The intestines being fully returned within the abdominal cavity, the old protruding sac is excised by the galvano-cautery to a level with the pillars of the ring. The edges of this sac are now seized with serrated forceps in the hand of an assistant, care being taken not to bruise the edges. The operator now, with animal ligatures that have been thoroughly carbolized in oil, draws the two edges of this sac together by a continuous suture, leaving the ligatures long at both ends. The assistant holds the sac by these ligatures, instead of by the forceps, while the surgeon thoroughly freshens the pillars of the rings with the red-hot cautery. The pillars are next brought together, and the sac allowed to lie just beneath but in contact with them. A needle armed with silver wire is now passed deeply through the columns of the ring, and at the same time through the edges of the sac that are excised. This operation is repeated until sufficient sutures have been put in to draw the pillars well together. These sutures are then tightened either by twisting or by tying. The latter is the method that I prefer, because I can better judge the amount of tension, and am not so likely to produce a strangulation of the tissues. The ends of the carbolized ligatures are now cut off; the silver wire is smoothed down so as not to cause irritation, and the external integuments are stitched together with silver wire or silk. All that is needed to complete the operation is a compress of cotton, treated with either thymol, boracic acid, or carbolic acid; and the application of a common spica bandage." This operation differs greatly from the method advocated by Dr Warren in 1880, in the work above referred to. Then he strongly recommended injection of iodine as the best and only justifiable treatment, the method advocated in this country and in America by the late Dr Heaton, but which has completely fallen out of favour. The operation advocated now by Dr Warren is not, in our opinion, equal to the simple procedure of ligaturing the neck of the hernial sac, and leaving the ligatured portion as a plug in the canal. The use of the cautery may cause subsequent contraction and so assist the cure, but how it can "freshen" the pillars and so favour union of their margins we cannot see, for a certain amount of dead texture must be thrown off and granulation tissue be formed before new material can be thrown out to fill up and contract the opening. The third paper on hernia is by Mr R. N. Pughe, F.R.C.S., who advocates operation for radical cure in children above two years of age who have large herniæ. After discussing various methods of operating, he says that "evidence is strongly in favour of the 'open method,' which, especially if undertaken with thorough antiseptic precautions, is almost devoid of danger, or even unpleasant symptoms." This "open method" he previously defined as "the operation which consists in cutting down on the neck of the sac, with antiseptic precautions, and tying it as high up as possible at the inner ring." In referring to Mr Spanton's method he says, "Mr Spanton has been almost uniformly successful in his cases; and Mr Banks, in his paper recently published in the *British Medical Journal*, strongly recommends Mr Spanton's as the operation to be performed in childhood. It undoubtedly is by far the most satisfactory and practical of the subcutaneous methods, and, in the hands of its author, has been extremely successful, but I question whether it would be equally so in other hands." We are inclined to agree with Mr Pughe, especially in his last statement. We doubt very much whether this operation, which sounds so simple, would not be very dangerous in the hands of one who had not been specially trained to its performance. Mr Pughe, and also those surgeons who spoke in the discussion which followed the reading of the paper, seemed to consider, as we also do, that in young children herniæ are, as a rule, cured by the use of a properly fitting and regularly worn truss.

THE ERYSIPELAS GERM.—At the recent congress of German surgeons, Fehleisen demonstrated the micrococci of erysipelas. A patient had been inoculated forty-five hours previously, and when shown displayed a typical erysipelas. The micrococci which had been implanted were the product of more than thirty generations, cultivated on gelatine, and could be considered entirely free from extraneous matter or germs. Of eight thus inoculated, only one failed to show typical results. The last trial in April was just as successful as the first during the previous August, and with the same culture. The one person on whom the experiment failed had suffered from an idiopathic attack but a short time before.—*American Practitioner.*

TREATMENT OF PSEUDARTHROSIS OF THE TIBIA.—Dr F. Guermonprez relates, in the *Bulletin Général de Thérapeutique*, a case of ununited fracture of the tibia cured by means of successive slight irritations of the opposing surfaces of bone, occasioned by the moderate use of the member. He concludes that, in cases of this kind, walking within appropriate limits is not injurious, and may even be conducive to a cure. The limb is to be steadied during use by means of stiff, well-fitting splints, closely bandaged to the parts.—*American Practitioner.*

TREATMENT OF FISTULA IN ANO.—Dr Poingt claims (*Le Courrier Médical*) that any fistula amenable to treatment by the elastic ligature may be cured by simple drainage of the fistulous tract. The drainage-tube is inserted by means of a stylet passed up the tract from the external opening. At the end of two or three weeks the drainage-tube falls out, after having destroyed the superficial wall of the fistula. A granulating surface of small extent is left, which rapidly heals by cicatrization.—*American Practitioner.*

BORAX AND GLYCERINE IN ERYSIPELAS.—In the *Medical Times* (Philadelphia) will be found an article on the treatment of erysipelas, in which the writer recommends the local application of borax dissolved in glycerine in the strength of one drachm to the ounce, and applied on linen. The writer speaks from an experience of eight years, and claims that it cuts short the disease in a remarkable manner.—*Canada Lancet.*

THE USE OF VASELINE TO PREVENT LOSS OF ALCOHOL FROM SPECIMEN JARS.—In a paper with this title by Professor Burt G. Wilder and Dr Simon H. Gage, of Ithaca, N.Y., attention was called to the fact that the petroleum preparation termed vaseline was known to be practically unaffected by ordinary temperatures and by most substances. In the *Journal of the Chemical Society* for July 1882, p. 785, it was said to be sparingly soluble in cold strong alcohol, and completely in hot, but to separate out on cooling. After trying various substances—wax, paraffin oil, and glycerine—with but partial success, the use of vaseline was suggested by the two authors independently and nearly at the same time. The experiments tried last spring indicated that during three months, at ordinary spring and summer temperatures, there was no appreciable loss of 95 per cent. alcohol from glass phials or jars, whether upright or inverted or on the side, provided the corks were smeared on the bottom as well as on the side. Ground-glass stoppers were anointed and firmly inserted, and the rubber rings of fruit jars and the specimen jars made by Whitall, Tatum, and Co., were coated on both sides and the covers well screwed down. The authors had also used the vaseline for preventing the loss of other liquids, including chloroform and oil of turpentine; as a lubricator of drawers, and to prevent the sticking of the covers or stoppers of cement phials; and for the prevention of rust upon steel instruments.—*Dublin Journal of Medical Science.*

Part Fifth.

MEDICAL NEWS.

ROYAL COLLEGE OF PHYSICIANS, EDINBURGH.—The following gentlemen passed their final examination at the sittings held on 5th June 1884, and were admitted L.R.C.P. Ed. :—Edmund Barry Denny, Dublin; Thomas Brown Cross, Scarborough; George Samuel Pollard, Norfolk; Thomas Benjamin Luscombe, Teddington; Edward Tongue Yeates, Balbriggan; Wm. Chas. Glasier Collins, London; James Newton, Manchester; Henry John Clarendon Godfrey, London; Roger David Delahaye Williams, Swansea, So. Wales; Gerald Cæsar Hawkins, Teignmouth, Devon; George Philip Longman, Southampton; Arthur Richard Rackham, Old Calton, Norfolk; Sydney Robert Lidiard, Hull.

AT a Court of Assistants of the Worshipful Company of Grocers, held on Wednesday, 21st May 1884, the following candidates were elected to the Company's scholarships for research into the causes of important diseases, viz.:—

	Subject.
1. W. North (renewal) . .	Ætiology of ague.
2. Leonard C. Wooldridge, D.Sc., M.B., . . .	Hæmorrhagic disease, pernicious anæmia, and blood-clotting.
3. Alfred Lingard, M.R.C.S., .	Intimate ætiology of enteric fever.

Mr ANDREW CARNEGIE has given 50,000 dollars for the erection and furnishing of a laboratory for histological purposes in connexion with Bellevue Hospital Medical College, New York. The authorities of the College are naturally delighted at such a gift, which will tend to raise their School to a rank of European efficiency.

WE have received the first number of the *South African Medical*

Journal. It contains a number of interesting and well-written articles and papers. Altogether it is a creditable production, and we wish it all success.

ATTAR of roses, one minim to the drachm of iodoform, will, on the principle of the survival of the fittest, it is said, get the better of the odour of the latter drug, and the patient, instead of a social pariah, may become a garden of delights unto himself and all his neighbours.—*Boston Medical and Surgical Journal.*

TURPENTINE-IODOFORM.—A solution of iodoform in turpentine is lauded by De Renzi (*L'Imparziale*, November 1883), as quite beneficial in pulmonary troubles, more especially, however, in phthisis. Five drops of the solution are to be poured on wadding and then inhaled. This is to be repeated every few hours. The method is not entirely new, but does not appear to be much used in our country.—*New York Medical Record.*

SCIATICA.—In the *American Practitioner* Dr Comingor of Indianapolis recommends a somewhat new adaptation of an old treatment. The patient is placed under chloroform or ether; the affected limb is thoroughly flexed and extended, and made to move freely in all directions, and then at once put up in plaster of Paris, in which it is allowed to remain for a week. At the end of this time the cure should be complete. The treatment is best adapted for severe cases with contraction of the limb. It is virtually nerve-stretching without incision. With the forcible flexion we are already familiar, but not with the combination of a subsequent plaster case. We consider the method worth trying, and therefore record it.

THE IMAGINATION AND NERVE-STRETCHING.—Dr Westphal believes the so-called results of nerve-stretching in tabes dorsales are psychical, the patient undergoing a great operation, which he is assured must prove successful in his case, and from the sanguine view which ataxic patients take of their condition, they are only too ready to believe themselves better if required.—*Chicago Weekly Medical Review.*

IN a case of severe hæmorrhage from the kidney, Dr Radcliffe, of Washington, U.S.A., found instant benefit, after all ordinary remedies had been unsuccessfully tried, from the administration internally of the Rockbridge natural alum water. The principal ingredients of this water are, alum 72½ per cent., magnesia 7½ per cent., free sulphuric acid 3 per cent., and sulphate of iron 3 per cent. These proportions are taken from an elaborate analysis made by Professor Hardin of the University of Virginia.

WHO WOULD NOT BE A DOCTOR?—Quite a number of our young men are studying for the medical profession. We do not wish to deter them from this laudable pursuit, for a physician's calling is one of the most honourable, ennobling, humanizing, and useful in the world. But all is not gold that glitters, and the following are some of the sweets of a doctor's life: If he visits a few of his patients when they are well, it is to get his dinner; and if he does not do so, it is because he cares more for the fleece than the flock. If he goes to synagogue regularly, it is because he has nothing else to do; if he doesn't go, it is because he has no respect for the Sabbath nor religion. If he speaks reverently of Judaism, he is a hypocrite; if he doesn't, he is a materialist. If he dresses neatly, he is proud; if he does not, he is wanting in self-respect. If his wife does not visit you, she is "stuck up;" if she does, she is fishing for patients for her husband. If he has a good turnout, he is extravagant; if he uses a poor one on the score of economy, he is deficient in necessary pride. If he does not write a prescription for every trifling ailment, he is careless; if he does, "he deluges one with medicine." If he makes parties, it is to soft-soap the people to get their money; if he does not make them, he is afraid of a *cent*. If his horse is fat it is because he has nothing to do; if he is lean, it is because he isn't taken care of. If he drives fast, it is to make people believe that somebody is very sick; if he drives slowly, he has no interest in the welfare of his patients. If the patient recovers, it is owing to the good nursing he received; if he dies, "the doctor did not understand his sickness." If he talks much, "we don't like a doctor to tell everything he knows," or "he is altogether too familiar;" if he don't talk, "*we like to see a doctor sociable.*" If he says anything about politics, "he had better let it alone;" if he don't say anything about it, "we like to see a man show his colours." If he does not come immediately when sent for, "he takes things too easy;" if he sends in his bill, "he is in a terrible hurry for his money." If he visits his patients every day, it is to run up a bill; if he don't, it is unjustifiable negligence. If he orders the same medicine, it does no good; if he changes the prescription, he is in league with the druggist. If he uses any of the popular remedies of the day, it is to cater to the whims and prejudices of the people, to fill his pockets; if he don't use them, it is from professional selfishness. If he is in the habit of having frequent consultations, it is because he knows nothing; if he objects to having them, on the ground that he understands his own business, "he is afraid of exposing his ignorance to his own superiors." *If he gets pay for one-half his services* he deserves to be canonized. Who wouldn't be an M.D.?—*The Hebrew Standard.*

THE TRIALS OF A COUNTRY PRACTITIONER IN A COLD REGION. —Dr T. J. Hutton, of Fergus Falls, Minn., writes: "Your postal received. In reply, I have consulted many to-day as to the temperature on the night of 17th January 1883. All agree that it must have been somewhat lower still than —60° on that night, for at 10 o'clock in the forenoon of the 18th the spirit thermometers, which indicate but —52°, were still congealed. On the night of the 4th inst. it must have run equally low, for *at* 11 A.M. *it recorded*

—44°. My dear doctor, we are accustomed to such 'airs,' but as it seems to have for you an element of novelty, I enclose you an old photograph of myself about to go on one of these country calls. And if we met and you had an hour or two of leisure, I could treat you to many queer experiences on such calls—especially such midnight calls. How many times I have resorted to natural language—no interpreter within twenty miles! How often I have slept in a sour, greasy, buggy bed! How often the rooster crowing—perched on the foot of the bed—has awoke me in the morning! How often missed meals, so filthy the houses, hotels twenty miles distant! How often benumbed so in long midnight midwinter rides that I could not even get out my pocket-flask, so stiff my hands and fingers! How often lost by night on the prairie—in winter, too—whew! it makes my own blood curdle even now—for I will no more out winter nights—getting lost by day is bad enough in winter. My last 'lost' was last Friday, returning twenty miles from a diphtheria call. The road taken made the return trip over thirty miles. Sat five hours and thirty-five minutes in the cutter, temperature 30° below—but that was mild! Truly

" 'Who never ate his bread in sorrow,
Who never spent the midnight hours
Weeping and watching for the morrow—
He knows not you, ye unseen powers.' "

A MODEL CERTIFICATE was copied by Dr P. S. Conner from the records of the pension office in Washington; it reads as follows: "The braud muscle which compresses, lowers, and extends the linea alba, the muscle of expiration is entirely severed thereby affecting the scorbutus cordi, which goes straight up to the navel or umbilicus, and from thence down to the pubis which is evidently the primordial cause of the frequent abscesses of the scrotum. Also from the fact of increased attachment necessarily causes increased cicatrix which is constantly increasing, and hence the increase of all the detrimental symptoms."—*Chicago Weekly Medical Review.*

WANTED HIM TO TAKE MORE EXERCISE.—Scene: Office of a pompous doctor who knows it all. Enter a tired man, who drops into a seat, and says that he wants treatment. The doctor puts on his eye-glasses, looks at his tongue, feels of his pulse, sounds his chest, and then draws up to his full height, and says: "Same old story, my friend. Men can't live without fresh air. No use trying it. I could make myself a corpse, like you are doing by degrees, if I sat down in my office and didn't stir. You must have fresh air; you must take long walks, and brace up by staying out doors. Now I could make a drug store of you, and you would think I was a smart man, but my advice to you is to walk, walk, walk."

Patient.—But, Doctor——

Doctor.—That's right. Argue the question. That's my reward. Of course you know all about my business. Now, will you take my advice? Take long walks every day, several times a day, and get your blood in circulation.

Patient.—I do walk, Doctor. I——

Doctor.—Of course you do walk. I know that; but walk more. Walk ten times as much as you do now. That will cure you.

Patient.—But my business——

Doctor.—Of course, your business prevents it. Change your business, so that you will have to walk more. What is your business?

Patient.—I am a letter-carrier.

Doctor (paralyzed).—My friend, permit me to once more examine your tongue.—*Proceedings of the Medical Society of the County of Kings.*

OLD SHOES.

How much a man is like old shoes!
For instance, both a soul may lose;
Both have been tanned; both are made tight
By cobblers; both get left and right;
Both need a mate to be complete,
And both are made to go on feet.
They both need heeling, oft are sold,
And both in time all turn to mould.
With shoes the last is first; with men
The first shall be last; and when
The shoes wear out, they're mended new;
When men wear out they're men-dead, too.
They both are trod upon, and both
Will tread on others, nothing loath.
Both have their ties, and both incline
When polished in the world to shine:
And both peg out—and would you choose
To be a man or be his shoes?

American Practitioner.

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Part First.

ORIGINAL COMMUNICATIONS.

I.—TWO CASES OF SALPINGO-OÖPHORECTOMY: CLINICAL LECTURE DELIVERED AT THE ROYAL INFIRMARY, EDINBURGH, ON 4TH JULY 1884.

By ANGUS MACDONALD, M.D.

THE following two cases are, in a certain manner, a sequel of the kind of case to which I called attention on the last occasion on which we met in this room.

It will be within your recollection that I drew your attention to a case of gonorrhœal ovaritis. That I pointed out to you that, contrary to the currently accepted doctrine on the subject, gonorrhœa was quite as bad, if not indeed worse, when it affects the female than when it affects the male. It brings in its wake a serious chain of troubles, commencing with vaginitis and culminating in serious metric and perimetric diseases,—the result of such diseases being death in some cases, and a life of misery and pain in many other cases. In substantiation of these views, I referred not only to the special case under review, but to many others, and I hope impressed upon you the importance of careful management of gonorrhœa in the female, as well as of faithful dealing with such members of the male sex as ask your opinion upon the propriety or otherwise of marriage, in case a gleet exists or other evidence is present of imperfect cure of an old gonorrhœa.

I should wish to guard against the supposition that I believe the introduction of the gonorrhœa poison into the genital tract of the human female is the sole cause for the multiple miseries from which the class of cases I am going to lay before you suffer. I only wish to insist that it is one of the causes of them; perhaps I may venture to go farther, and say it is the most common cause of them. With those preliminary observations, I proceed to the record of the cases themselves.

CASE I.—Mrs Boyne, æt. 33, married, and residing at 24 Bowling Green Street, Leith, admitted to Ward XXVII., Royal Infirmary, 16th August 1883. The patient complained of a pain of an agonizing character in both groins, more especially in the left, which has lasted upwards of 20 months, during which time she has not known freedom from pain except during sleep. The pain is aggravated at each menstrual period. Patient is pale and careworn looking, evidence of pain being manifest in her facial expression. She is a fairly well nourished woman, all systems being normal except the genital. She has had four children and three miscarriages, the last being about two years ago. Her menstruation commenced at 13, and was perfectly regular every four weeks till two years ago, the amount of discharge being always considerable and more or less clotted. About two years ago she suffered from what was called inflammation of the womb. The medical man, under whose care she was at that time, ultimately decided that it would be needful to induce labour at the fifth month. Since this delivery the patient has had a sanguineous discharge every fortnight. During the time of her regular periods she was subject to a leucorrhœal discharge, which during the last year she has observed to be somewhat greenish. After the premature delivery already mentioned, she had an uneasy feeling over left side until the ninth day, when she began to flood very severely. She says that at the time of the abortion the after-birth was not taken away, but was allowed to remain during these nine days. The doctor was sent for, and he removed it then with considerable trouble. She remained in bed about three weeks after this, during which time she suffered no pain. But immediately on getting up the patient felt the pain she now complains of, which has gradually got worse until now. On vaginal examination it is noted that the right ovary is distinctly enlarged and tender. Left broad ligament appears clear. Vaginal portion of the cervix hypertrophied and tender. Fundus and body natural. Cervix slightly split.

The patient had been in the habit of visiting the Hospital for some time. As none of the measures adopted gave any relief, I suggested, after having observed the patient for some time, to remove the ovaries. To this assent was willingly yielded, and, accordingly, double salpingo-oöphorectomy was performed by me on 29th Sept. 1883, assisted by Drs Caird, Playfair, Buist, and Brewis. There was no difficulty in entering the peritoneal cavity. The right ovary was first sought for and found without much difficulty, an enlarged hydrosalpinx serving as a guide to its situation. The meso-ovarium and broad ligament were pierced by a blunt needle carrying a double thread of Chinese silk of medium size. The needle was withdrawn, the double of the thread being cut so as to form two ligatures. The pedicle was tied in two portions, care being taken to link the ligatures and to include nearly the whole tube. Further, the entire pedicle was included in one of the ligatures. The ovary and tube were now removed; no trace of bleeding from the cut surfaces. The left ovary and tube were treated in a similar manner, the left tube being diseased, though not enlarged so much as the right. The abdomen was then examined. Little sponging was needed, as during the operation there was no bleeding except a few drops from the abdominal wall during section of it. The ligatures were now cut short and both pedicles dropped into the abdomen. Two sponges were put behind the edges of the wound and ten stitches passed; the sponges were removed and stitches secured in the usual manner.

The dressing consisted of a piece of protective steeped in a solution of 1 in 20 carbolic lotion, applied to the wound. This was covered by a pad of salicylic wool. Above all was placed a roll of ordinary cotton wool, the whole being secured by a flannel bandage bound round the abdomen.

The temperature averaged 98°·8, and never rose above 99°·8, except on ninth day, when owing to abdominal disturbance it reached 100° F., but returned to normal after a dose of castor oil had acted. Wind was passed on the third day after the operation. Three of the deep stitches were removed on the fifth day, and the rest on the seventh day. On the 11th October it was entered in the case-book that the patient was taking pultaceous food freely, and had been allowed a little chicken sometimes. On the 13th it is stated that the abdominal wound was quite healed. Pulse 90; tongue clean. Patient stated that since the operation, instead of the continuous agonizing pain which had lasted for nearly two years, she had been absolutely free from pain, only experiencing an occasional feeling of constriction in the ovarian region for the first few days.

Patient continued to make perfectly satisfactory progress, and was discharged on 6th December, completely free from pain and looking happy.

Microscopic sections of the left ovary and tube were made for me by Dr Caird. The right ovary with its attached tube was retained as a museum specimen, and is here shown you. The ovary examined was found to be composed of dense fibrous tissue, not a trace of a graafian follicle being found in any part of it. The sections of the tube exhibit the peculiar dendritic looking foldings special to the Fallopian tube in its less distended portion. In the dilated part the tube is seen to be made up of an exceedingly thin wall of muscular and connective tissue, covered internally by cubical epithelium. Both ovaries were small, but contained no cysts. The ovaries therefore exhibit the organs in a state of advanced cirrhosis, and the tubes in the condition of great dilation, apparently due to retention of their natural secretion.

It will thus appear that this patient suffered from chronic ovaritis, which had advanced in the left ovary, at least, to the condition of atrophic shrinking. In addition both tubes had manifestly become the subjects of adhesive catarrh, by which apparently the fimbriated ends had become adherent to the ovary, and the proximal ends had closed through adhesive inflammation. Both tubes accordingly had become dilated into elongated thin-walled cysts. The dilation on the right was more pronounced than on the left, so that the cyst thereby formed could be readily felt per vaginam, and was mistaken by me for an ovary. It was tensely filled with clear fluid, and when being manipulated with the view of being removed along with the ovary it burst, and its contents were squirted with great force over the room.

It is not clear how this case originated. It must, however, have taken origin in connexion with the most recent delivery, which was premature and artificially induced. There appears, however, to have existed some inflammatory disease before that time, from the inference one may draw from the patient's statements about her medical attendant's opinion. If her statements regarding her delivery are reliable, it would appear that the disease originated in a puerperal endometritis, which had extended to the ovaries, and which afterwards continued in the form of uterine catarrh between the periods, and menorrhagia at the period. Be that as it may, it is perfectly clear that inflammatory mischief, arising in some way or other, came to affect both ovaries, led to adhesions between them and the tubes, and caused profound disturbance within these organs. These changes were accompanied by extreme pain and distress. The centre of distress was referred to the region of the ovaries and broad ligaments.

It will be noticed that in this woman's case the pain was almost constant, only being subject to exacerbations at her periods. This would seem to point at the dilatation of the tubes and ovarian changes as a tolerably constant source of irritation and pain in her case. It may also indicate a certain tendency to exaggeration on the patient's part. That, however, she was a very great sufferer was manifest in her physiognomy, which altered very unmistakably when the cause of the pain was removed. The patient left the Hospital in excellent health, and perfectly free from pain.

It is only right to state, however, that a few days ago, she returned, complaining of some dragging pain in the situation of the left broad ligament. Careful exploration could detect no fulness, tenderness, nor deposit in that situation, nor on the right. The uterus was perfectly movable, and no trace of the operation could be determined by combined manipulation on either side of it. The patient was ordered an arsenious nervine tonic, and from her appearance I judge that this uneasy feeling will soon pass away, now that we know the cause of the evil is removed.

CASE II.—Mrs Birrell, 35, married 16 years, no children. She thinks she had a miscarriage 7 years ago. Admitted into Ward XXVIII. 21st April 1884.

The patient complains of pain in the left groin at each period, which has tormented her for more than ten years, and which she is unable to trace to any attack of fever. On strict examination, there is no evidence of the patient's having suffered from gonorrhœa or syphilis at any time. The pain, which occurs only at the periods, and not intermenstrually, continues for about thirty-six hours at each time, and is accompanied by absolute prostration and inability to eat, sleep, or work. About two days after there is an attack of sickness, which continues for about a day. During the attack of pain the left leg is usually enfeebled. For the last six months the menstrual flow has been scanty, but the pains have become intensified, not diminished.

Examination per vaginam reveals that the vagina is short and wide. Uterus is very tender and retroverted, slightly retroflexed. The right ovary is hard and excessively tender, and somewhat prolapsed. The left ovary is felt with some difficulty in the anterior part of the left lateral fornix. In every respect other than her genital system, the patient exhibited the appearance of fair, though not of robust health.

The patient had suffered so long and so severely from these distressing, ever recurring attacks of pain, and latterly of weakness of the left side, that she was anxious to submit to any treatment that presented a chance of affording her complete relief. She had, both in Burntisland and in Dundee, tried various measures suggested by her medical advisers to afford her relief, but nothing proved of any avail. Some years ago the operation of removal of the ovaries was suggested to her. But something came in the way of her carrying out this proposal at that time. She accordingly was prepared for operation being suggested, and had already made up her mind to submit to it before she was received into the Infirmary.

Some delay occurred before accommodation in the private ward could be found for her, and accordingly it was not till the 24th of May 1884 that the operation of salpingo-oöphorectomy was performed by me, assisted by Drs Chapman, Playfair, and Brewis, etc. The operation lasted in all 40 minutes. Incision was made in the middle line, and the peritoneum was opened without much difficulty. Some trouble was experienced in getting hold of the ovaries, owing to the deep position of the uterus, and the peculiar shortening of the Fallopian tubes, especially of that on the left side. There was also a little prolapse of the bowel, which was facilitated by the incision being carried slightly too far upwards. The left ovary was first brought to the surface, and its attachment to the broad ligament secured by a two-linked silk ligature — the tying of the Staffordshire knot being prevented by the needle accidentally cutting through the ligature. The ovary and attached tube were then removed, and there was no bleeding. The right ovary and attached tube were similarly treated, only that its attachment to the broad ligament was secured by a Staffordshire knot. The pelvis was then cleansed by sponge of any drops of blood which had fallen into it. The pedicles being found perfectly dry, the ligatures were cut short, and dropped into the abdomen. The abdominal wound was brought together by eight deep sutures of carbolized silk, and numerous superficial stitches of silk-worm gut, and the wound was then dressed with protective, dipped in carbolic lotion and salicylic wool.

Pulse 70 immediately after operation; temperature rose to 100° F. at 8 P.M., with pulse 90; urine drawn off (12 oz.) by catheter at 11.30 P.M.; good deal of vomiting.

On 26th the temperature ranged from about normal to 99°·2 since operation, and pulse about 70; 10 oz. urine drawn off at 6 A.M.; Morphia supposit. ¼ gr. at night.

The patient was very excitable and restless on the day following operation, with a good deal of sickness. She was so unmanageable that she had to be strapped down in bed, and it was feared the stitches in the abdominal wound might give way. On following day the patient was quiet, and by the 28th the temperature was normal and pulse 80. On same day the patient was allowed food for the first time, in the form of dessert-spoonfuls of milk and water every two hours, which was increased on the following day to a tablespoonful, and one ounce a day after that. Some brandy was allowed occasionally during these three days. On the Saturday (31st May) some beef-tea was permitted, fish the following day, chicken soup during the next week, and ordinary diet on the sixteenth day after operation.

The deep stitches were taken out on the 30th of May, seventh day. Patient well; temp. and pulse normal; superficial stitches were removed about five days later.

The patient made an excellent recovery, having presented in the course of it no bad symptom, and was dismissed on 25th June 1884, looking well and free from pain of any kind. There has, as yet, not been time to examine microscopically the structures removed in this case. But the following careful statement has been made of their general appearance by Dr Chapman. The structures removed from right side consisted of the ovary, to the outer edge of which was adherent what was evidently a portion of the tube next the fimbriated end. The fimbriated end itself arched over the upper border of the ovary like a hood, but was not adherent to it. The ovary was of a palish yellow colour with a tolerably smooth surface, under which there projected several small cysts, varying in size from that of a millet seed to that of a pea. The ovary measured 1 × ¾ × ½ inch. The adherent tubal portion when removed measured 1¼ inch, and was slightly distended. On cutting into it there was found to be three tubular openings in it, each containing a small quantity of serum.

The ovary on section presented several small and one specially large cyst. There has not been time as yet to obtain microscopic sections of it. The parts removed from the left side consisted of the ovary, to the outer side of which there was firmly adherent a mass consisting apparently of the end of the Fallopian tube.

The ovary resembled that of the right side, and measured 1 × ¾ × ½ inch. The adherent mass when viewed from above presented a horse-shoe shaped contour, with, in the centre, a rounded projecting portion, the whole having the appearance of being formed of two convolutions of the Fallopian tube. The horse-shoe shaped portion which formed the outer limit of the mass measured 1⅛ in. in both directions, while the thickness measured ¾ of an inch. On measuring the length of what appeared to be the convoluted Fallopian tube it was found to be not less than 2¾ inches! The ovary and convoluted tube of left side are here shown you. The pathological conditions exhibited in this case are certainly very peculiar.

It would appear that, as the result of adhesive inflammation in both broad ligaments in relation to the Fallopian tubes, the tubes had been not only brought to adhere to the ovaries, but had besides, especially on the left, been dragged upon and puckered up, so as to appear convoluted. The ovaries on both sides, but especially on the left, were dragged upwards close to the angle of the uterus. It was difficult to understand at first sight how that could be effected, until an examination of the portions of tube attached to the ovary was found to be coiled upon itself in the curious way above described. This also explains the way in which the left ovary was felt so far forward in the left anterior fornix. The cystic condition of the ovaries also show that they were the subject of serious disease.

The ultimate history of this case we are at present unable to foresee, as the time is too short since the operation. But, judging from the pathological conditions found, there is the best reason to anticipate permanent success.

The cases whose history we have now read form a large class, which have hitherto been the opprobrium of gynæcology. They have been treated with iron, quinine, and strychnia *ad nauseam.* They have been subjected to hot hip-baths and cold hip-baths in an infinite iteration. They have had their feet held in hot water at the periods, and they have been deluged with narcotics and even stimulants to allay the terrible pains from which they suffered. They have tried the patience of friends, the skill and tact of the doctor, and have formed no inconsiderable contingent of the slaves of narcotics and of stimulants. I do not mean to say that the tonic and palliative treatment which such cases receive have not done them good. Far from it. But I mean to say that it is only a partial good, and that the violence and persistency of the patient's sufferings warrant a bolder treatment than has been usual, and justify us in adopting the method of operation in at least a certain, and, I believe, ever increasing proportion of cases. That is to say, I believe that as our knowledge of the symptoms and diagnosis of a chronic tubo-ovarian inflammation increases, we shall be able to extend the benefits of operative measures to a much larger class of cases than as yet has been found applicable.

Tubo-ovarian inflammation and its products, or what, for want of a better name, we might, following the French principles of nomenclature, style "Tait's disease," is a condition that is not unfrequent. It has been urged that it only seldom is seen in the post-mortem theatre. But against that it must be argued that it has hitherto been seldom looked for, and that, in case of a fatal result, the immediate cause of death is not the Fallopian disease, but the consequent peritonitis. The latter condition is, therefore, much more likely to mask the former, unless the person performing the sectio has his mind specially drawn to it. But it is not unknown in the dissecting-room. In the spring of 1882 a patient was admitted into Ward XXVIII., Royal Infirmary, and died on the night of admission. Post-mortem examination revealed the cause of death to be due to the bursting of the right Fallopian tube, which had been converted into a huge suppurating cavity. The left tube was in a similar condition. It has fallen within my experience to know of three cases, lately operated upon, one of which I have myself recorded, and which was fatal, in whose case the tumours removed were all composed of enormously dilated Fallopian tubes. I now show you the specimens in two of these cases. The contents of these Fallopian tubes vary from a clear watery discharge to thick pus.

I was also consulted some time ago regarding an elastic tumour along the right side of the uterus, which appeared to me to be a dilated, possibly suppurating, tube adherent to the ovary. The history, which is very peculiar, was that of an acute suppurative ovaritis following upon a delivery, the resulting abscess discharging itself into the uterus. Pus at least was seen to be discharged from the external os concurrently with the diminution in size of the original tumour. Since its first start, over six years ago, the patient has had two children at term, showing that the uterus itself was not seriously interfered with. But every now and then the patient has been liable to attacks of pain and swelling in the right side, which follow a wonderful periodicity, always, if they do arise, starting at a particular day before the next menstruation.

It would appear that in this case the communication, which we assume to be tolerably free between the secreting cavity and the uterus, got occasionally blocked, and the secretion accumulating, gave rise to pain. If the escape was equal to the amount secreted, the attack of pain did not occur for that particular menstruation. Conditions of this kind are, to my mind, exceedingly inexplicable, except on the idea of an old ovario-tubal abscess cavity communicating with the uterus through the tube.

In regard to the origin of these tubo-ovarian cases, there appears little doubt but they are largely catarrhal, the inflammation extending from the endometrium along the tubes to the ovaries. As pointed out by Mr Lawson Tait, the tubes are almost invariably found adherent to the ovaries. It would appear also that the dilatation and disfigurement of the tubes was due to the tubal adhesions, to the ovary blocking the one end of the tube, whilst the other end became obliterated by adhesive inflammation. The tube thereby becomes a shut cavity, which fills with clear fluid, pus, or other materials, according to the intensity of the changes taking place in its mucous membranes. The ovary partakes in the general affection, as it is found, as in our cases, that the ovary is also the seat of chronic inflammation. If much dilatation takes place in the tubes, it may be impossible, in consequence of the disfigurement resulting, to detect the original ovary in the cyst thus produced.

It would appear that the reason why we had no marked dilatation of the tubes in our second case was due to the fact that the tubes, though the subject of chronic inflammation leading to great disfigurement of them, were on neither side adherent to the ovary by their fimbriated extremities. In the case of the right ovary, the fimbriated end of the tube covered the ovary as with a hood, although its surface was not attached to it. One or two doubles of another part of the tube were, however, adherent to the ovary.

Of all the causes leading to tubo-ovarian inflammation, from clinical observation gonorrhœa appears to be the most common. But it would appear unwarrantable to affirm that many other conditions may not produce it. Apparently endometritis after delivery may cause it, as in our first case. The second case could be referred to no definite starting-point.

It is well known that chronic ovaritis arises, among other causes, from the abuse of alcohol and opium, as also from an attack of fever, as from scarlatina. The fact that abuse of alcohol and of opium may cause ovaritis ought always to make us pause before recommending operative measures, so as to ascertain the habits of our patients, in case it should turn out that attention to our patient's morals might be of more service than any operative measures, whilst it neither put her to unnecessary pain nor exposed her to risk.

Before operating we should always be sure of our ground. It is a crime against our patients, as well as discreditable to our profession, if we allow ourselves willingly to operate unnecessarily, and thus risk lives unwarrantably.

But when we consider the miserable existence that so many patients with chronic ovaritis and tubo-ovaritis drag on—when we think of the pain and the horror which each successive menstrual period brings—when we behold the anxious sufferer looking forward with expectant desire to the wished-for menopause, which almost invariably is abnormally delayed by the pathological conditions involved, we are surely warranted in offering her the opportunity of relief. In bad cases with much adhesion, there is no blinking the fact that salpingo-oöphorectomy is a serious operation, and not without considerable risk to life. In simple cases it is much less riskful than ordinary ovariotomy. The brilliant results of Messrs Tait and Savage of Birmingham bid fair to establish the operation as one of comparatively little mortality. It is true some special care is needed in entering the abdominal canal, and also the deep stitches ought to be put much closer to one another than in ovariotomy, to avoid any portion of bowel being forced between the edges of the wound, as no large tumour being removed, the intra-abdominal pressure is greater than after the more common operation. But in the simpler cases of this operation, the traumatism is much less than in ovariotomy, and the mortality, with care, ought to be by-and-by a vanishing fraction. Difficult cases, with much pelvic adhesion, undoubtedly present great difficulty, and will not fail to test the highest surgical skill and ingenuity. But even in these cases the results recorded are highly encouraging.

While deprecating too frequent operations, one feels inclined to guard also against too exclusive resistance to operative measures. To judge of the statements of some gynæcologists, it would almost appear that in women pain was no evil, but a physiological necessity that must be accepted by the sex. If a woman can be brought to believe that whatever pain she suffers must be borne by her, then on that view a gynæcologist's work is done.

On the other hand, we meet a class who are too ready to magnify any little sensation into undue importance. Both are wrong. As the ancient Stagyrite philosopher suggested in the general, in this case also truth lies between the two extremes. We should attempt to eliminate fairly the true from the imaginative in our patients' statements of suffering, and while not giving attention to the unreal, we should not overlook the real.

This is the kind of problem that meets one in dealing with the class of cases under consideration. We have constantly to decide whether the pain and distress complained of and referred to the ovary is due to local changes, and consequently removable by local treatment, or originates in the nervous centres, and is only referred to the ovary. The advance of observation will doubtless tend to lessen this uncertainty. But at present it is a real one. To find ovaries and tubes one after another in the state of disease in which we have found these structures in our two cases will help in this work.

By advancing our knowledge of the pathological changes to which we know the uterus and the ovaries are liable, we shall be able to form a better idea of disease than is implied in the phrase "irritable ovary," or "neurosis of the ovarian centres," as perhaps

Dr Clifford Allbutt would style it. My belief is that "irritable ovary" will disappear as we improve our knowledge of chronic ovaritis. As it is understood at present it expresses nothing accurate. One might almost as well speak of irritable face when the subject of erysipelas. I believe almost all those cases are due to chronic atrophic ovaritis with or without tubal complication, and that as our knowledge of ovaritis is perfected, our knowledge of irritable ovary will vanish. I would therefore feel inclined to recommend the operation of oöphorectomy in such cases as, after excluding the possibility of abuse of opium and alcohol, were the cause of excruciating and distressing ovarian pain, so as to seriously interfere with health and comfort. This I should the more recommend if there were also present evidence of tubal distention and ovarian enlargement. I do not think that such operation ought to be limited to such cases only as on account of ill health are reduced by pain and weakness to such a condition as to be scarcely able to leave their beds. I think we ought rather to interfere so as to avoid that result ever coming on.

It is puerile to argue that you are depriving the woman of procreative power. In 99 cases out of 100 in which the operation could be proposed the pathological changes already present preclude the possibility of fertility. This point is well argued by Mr Lawson Tait in the recent edition of his work on diseases of the ovaries. He would be a bold man who would venture to say that procreation was possible in either of the two cases I have here reported. Both the ovaries and the tubes were so thoroughly disorganized as to preclude the possibility of impregnation.

Every gynæcologist almost has a number of chronic cases in which pain and distress in the ovaries and uterus are rendering the life of the woman miserable, and whose case he would have recommended for operation, if he had seen it ten or fifteen years ago with his present knowledge of the subject.

We who were educated under inferior auspices are inclined to envy you young men starting life with a knowledge of ovarian and tubal physiology, pathology, and treatment, so much more advanced than it was in our student days, and to expect great things from you. It will be in your power, and I hope it will be found that you will avail yourselves of the opportunity, to convert many miserable lives into a condition of health and comfort, and to save many a poor patient from the evil consequences of the do-nothing treatment as well as from malpractice. But wishing you success, I must stop, merely saying again, that in the surgical treatment of tubo-ovarian disease, I believe there is a field to be much more fully occupied than it has yet been; and that when it is fully occupied, and the conditions of withholding from operation, as well as of those of operating, are thoroughly understood, we shall find in it the means of materially and permanently allaying a large amount of female suffering, which at present is very imperfectly treated.

II.—GERMS AND THE SPRAY.

By JOHN CHIENE, Professor of Surgery in the University of Edinburgh.

(Read before the Medico-Chirurgical Society of Edinburgh, 2nd July 1884.)

THIS experimental investigation has been undertaken in order to fulfil a promise which I made to this Society when Mr Duncan read his paper entitled "Germs and the Spray" on the 7th of February 1883. My reason for making that promise was that his experiments seemed to me to require repetition, because the results were different from the results of a series of experiments which I had made some years before.

I owe an apology to the Society and to Mr Duncan for the delay which has occurred in the fulfilment of that promise. The experiments which I have now to bring before you were begun in March and completed in June of the present year. At all these experiments I have myself been present during the whole period of each, and I have taken every precaution to make the test as reliable as it possibly could be. I have been ably seconded in this endeavour by my assistants Mr Hare and Mr Baily. The experiments during March were made with the co-operation of both these gentlemen, the later experiments by Mr Hare and myself. I feel very specially grateful to Mr Hare for the great trouble he has taken and the earnestness with which he has carried out the investigation. Mr Baily's departure from Edinburgh in May prevented him from sharing equally with Mr Hare and myself in any credit there may be in bringing the experiments to a conclusion. I have thought it right to bring all the flasks used before the Society in order that the Members may have ocular demonstration of the results obtained.

I think it will add to the clearness of what follows if I divide this paper into three parts, describing in turn the spray, the preparation of the alterable fluid, and the experiments performed with these two factors.

The spray employed was one of Marr's, which belonged to the late Dr Lyon of Glasgow. It possesses a high pressure safety valve, and is heated by a powerful spirit lamp, on the model of that which I introduced some years ago, and which has since been adopted and, without my permission, patented by Mr Marr.

This spray was chosen because it is to some extent representative, as it is the one now used by Professor Lister.

A series of observations was first made as to the time it could safely be trusted to play actively, and the strength of the spray cloud it produced. It was found that it would play for 76 minutes, and that the strength of the cloud produced varied from 1 to 25 up to 1 to 29; this variation depending on the amount of 1 to 20 carbolic acid solution present in the receiver. If that receptacle was full, the strength was 1 to 25; if, on the other hand, it was nearly empty, the increased difficulty in raising the column of lotion diminished the strength of the cloud produced to 1 to 29. As, however, in all this series of experiments the receiver was maintained at least half full, the weakest spray cloud we had here to deal with was one of 1 to 27. The acid used in making the solution was the pure crystalline phenol of Bowdler & Bickerdike.

Authorities[1] are agreed that a solution of 1 to 30 is sufficient to destroy organic life. In using a carbolized vapour of 1 to 27 we were within the recognised standard.

The fluid used in the experiments I have now to describe was a *half per cent. solution* of Darby's Fluid Meat (sp. gr. 1002), which forms a clear and highly refractile medium, which is peculiarly capable of maintaining the growth of organisms, and gives a distinct cloudy reaction when infection does occur. It was first filtered, and then steamed (at 212° F.) in the steam sterilizing apparatus devised by Koch, for 30 minutes on each of two consecutive days. This process is found amply sufficient to preserve the great majority of nutrient fluids, and has the special advantage of preventing any evaporation, so that the experimenter can work with a sterile liquid of known bulk and specific gravity. To the importance of the latter point I shall subsequently refer. The liquid thus prepared was then decanted into glass beakers supplied with cotton-wool plugs, the whole of which, with their plugs, had been previously sterilized by super-heating in a hot-air chamber (320° F.) for one hour.[2] To insure complete sterilization of the charged beakers, and to obviate the risks of contamination which necessarily accompany the decanting, the whole were next subjected to an additional 30 minutes' steaming on each of two succeeding days.

All the beakers so prepared were now incubated for four days at a temperature of 95°–102° F., and under this incubation a small proportion of the beakers became cloudy. These were rejected from the experiment. Beakers of three sizes were employed, of 3½, 2, and 1 inch diameter respectively, and they were charged in the following proportions:—

In the large beakers (3½ in.), .	150 cc.	nutrient fluid.
In the medium beakers (2 in.), .	25 cc.	
In the small beakers (1 in.), .	10 cc.	

The experiments may for reference be divided into four series. The 1st and 2nd series were performed in the Surgical laboratory, the 3rd and 4th series in the Surgical lecture theatre in the New

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[1] *Vide* Lister—*Dublin Journal of Medical Science*, August 1879. Watson Cheyne—*Antiseptic Surgery*, p. 26. Beatson—*On Lister's Antiseptic System*, part viii. p. 21. Miquel—*Les organisms vivants de l'atmosphère*, p. 293.

[2] See Koch's method in Ziemssen and v. Pettenkofer's *Handbuch der Hygiene: Fermente und Mikroparasiten*, p. 296; also Klein in *Practitioner*, March 1883.

University Buildings. Beakers of all three sizes were used in the 1st and 2nd series, beakers of the large size only in the 3rd and 4th series. This alteration was made for two reasons.

1st, That from experiments on the amount of carbolic solution which fell into the smaller sizes of beakers there was a possibility that the growth of organisms might be checked in consequence of the nutrient fluid becoming carbolized.

2nd, Because Mr Duncan in his paper laid special stress on the impossibility of preserving beakers of the largest size (3¼ in.) aseptic for more than 20 minutes.

The beakers and spray were arranged on a table in each of the experiments, as is seen in Diagram 1.

In all cases control experiments were conducted alongside of each spray experiment.

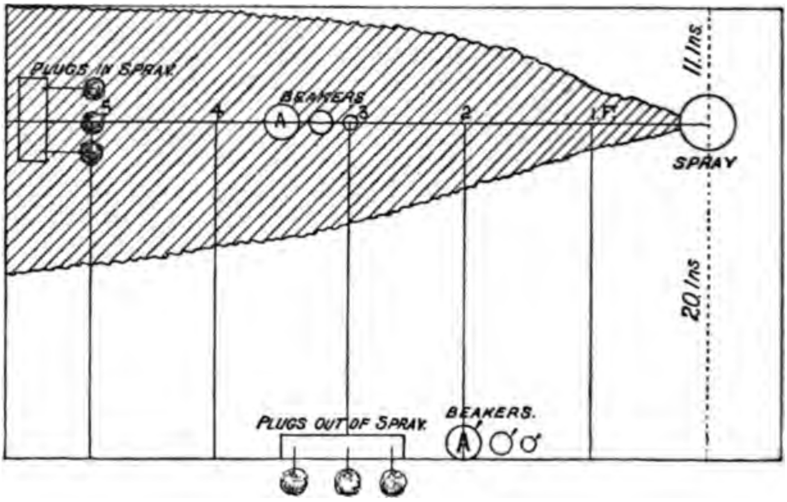


FIG. 1.

Each experiment in the 1st and 2nd series, as is shown in the diagram (Fig. 1.), consisted in uncovering beakers of three sizes, and in the 3rd and 4th series beakers of one size only, respectively in and out of the spray for the same length of time, at a distance of three feet from the mouth of the spray. The plugs of the three spray beakers were suspended in the spray cloud; those of the non-spray beakers out of the spray, with their lower ends directed downwards and covered by a cloth soaked in a one per cent. solution of mercuric chloride, to obviate, so far as possible, contamination through the natural tendency of atmospheric germs to gravitate. The hands and arms of the manipulator and every other object, which even approached the area of the experiment, were carefully disinfected by soaking in the same solution.

The results of these experiments can best be grasped by reference to the 2nd diagram (Fig. 2).

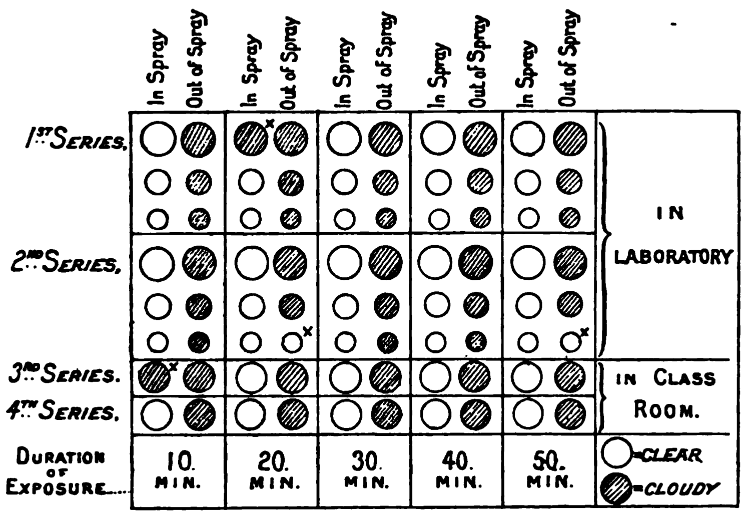


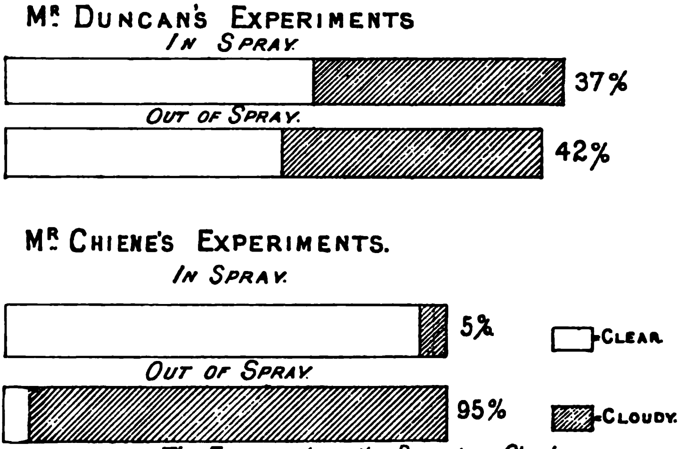
Fig. 2.

It will be seen that of 40 beakers exposed out of the spray, 38 became turbid; the two which remained clear being of the smallest size—1 in. diameter.

Of 40 beakers exposed in the spray 38 remained clear, and the two which became cloudy were of the largest size—3¼ in. This coincides exactly with Mr Duncan's statement of the relatively greater difficulty of preserving large sized beakers aseptic. In looking over the laboratory note-book, however, the following entry, which explains the failure, is found opposite the description of the experiment in which one of these two clouded beakers was exposed:—

"*April* 1*st*, 4.20 *p.m.* *Expt. commenced.*—Lamp was not turned on at beginning of this experiment. Mistake discovered and remedied at 4.23 P.M." This note was jotted down at the time, and came to have a peculiar significance, when, on the fifth day after the experiment, the beaker in question showed signs of active organic life.

As the foregoing series of experiments was performed merely with a view to testing the results of Mr Duncan's series, I have thought it well to compare diagrammatically the results obtained in each. In this diagram (Fig. 3) the deeply shaded parts represent cloudy beakers, the clear parts unaltered beakers, and the proportions are drawn to scale, ¾ in. being allotted to each beaker; and by this method of comparison the wide difference between Mr Duncan's results and my own is at once apparent. It would appear that I have worked either in a much more impure atmosphere than Mr Duncan, or with a medium which is more putrescible; but in either case the action of the spray as an antiseptic agent is the more remarkable.



The Figures show the Percentage Cloudy

FIG. 3.

The striking results obtained in these experiments may be explained on one of four suppositions:—

1. The purity of the atmosphere.[1]
2. The mechanical action of the spray, displacing and driving away the causes of putrefaction from the mouth of the beaker.
3. The chemical action of the condensed carbolic acid solution from the spray which falls into the beaker and renders its contents incapable of supporting life.
4. The germicide action of the spray vapour which mixes with the air at the mouth of the beaker and destroys the vitality of the germs suspended in it.

The first hypothesis at once falls to the ground, for the results of the control experiments with flasks exposed outside the spray show that we had to deal with a densely germ-laden atmosphere, and it could only be tenable under such circumstances as those obtained by Tyndall in his experiments with glacier air, which he found to be totally germless.

The mechanical theory falls to the ground when we remember that sprays of salicylic and boric acids have been found ineffectual. The same result occurred in some experiments tried by Mr Hare during the last few days with a spray of boiled distilled water.

The chemical theory is strongly opposed by Mr Duncan, who states that in his experiments the amount of carbolic acid which fell into the beakers may be left out of account, as it did not prevent the majority of them becoming septic. In addition we have the authority of Miquel for stating that a solution of less than 1 to 31 will not, with certainty, prevent putrefaction.

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[1] See Tyndall, *Floating Matter in Air*, pp. 294–296.

A series of experiments was performed with reference to this point, and I found that in the largest sized (3¼ in.) beakers, enough carbolic acid found entrance in the course of 30 minutes to bring up the strength of the solution in the beaker to 1 in 3000.

Can such a weak solution have any effect on the putrescibility of the solution of Darby's Fluid Meat? or are the effects due to the destructive power of the spray acting directly on the organisms?

I am now occupied in an attempt to solve this rather intricate problem, and I shall venture to indicate the way in which I think the question must be approached.

In the first place, I was anxious to learn what happens to the carbolic solution which falls into a beaker standing in the spray. Does it diffuse itself in the liquid, or float, or sink? To settle this I have called into use one of the most beautiful and delicate reactions which chemistry affords us, viz., the violet coloured reaction which occurs on the combination of carbolic acid with a solution of perchloride of iron.

In my first experiment I used a mixture of water, with glycerine and perchloride of iron, a liquid of high sp. gr. On turning the spray upon this a beautiful purple layer, very delicate in its thinness, was soon apparent floating on the surface, and it continued to become thicker and more distinct whilst the spray played upon it. In the next experiment the liquor (B.P.) was used in the strength of one drop to the ounce of water, with a sp. gr. infinitesimally above that of water itself. Here the result was very different. Whilst the spray was playing upon this liquid, minute violet drops were seen to form at the surface, and to slowly gravitate downwards to the floor of the beaker. At the end of half an hour's experiment a faint violet cloud occupied the lower strata of the liquid in the beaker. Hence the subsequent behaviour of the carbolic solution which falls into a beaker depends greatly upon the sp. gr. of the contained liquid; and the practical indication from this is to employ a fluid of sp. gr. as near as possible equal to that of the solution thrown in the spray cloud, so that diffusion may be rapid and complete, and no local action of concentrated lotion will occur at any part of the beaker.

In the experiments already detailed beakers of large size have been preserved aseptic, after exposure, for periods of 10, 20, 30, 40, and 50 minutes each, and still remain clear, but these experiments throw no special light upon the question of how the spray exerts its now undoubted power. It seems to me that the crucial test of this matter will be the momentary exposure of large beakers under the spray in an atmosphere so densely germ laden as to insure that some pass into the beaker after traversing the spray, the period of exposure being at the same time so short that the amount of carbolic solution which enters shall be absolutely infinitesimal.

Another method of research which commends itself is the attempt to exclude the spray altogether from the sterile nutrient material, and I am attempting to accomplish this by using solid instead of liquid media, the beakers containing which can be inverted or placed at any angle, so as to prevent the ingress of the spray cloud.

Such an arrangement I now show you, which consists of a tumbler with a layer of Koch's nutrient peptonized gelatine, enclosed and sterilized in a beaker by a method devised by Dr Woodhead and Mr Hare. These beakers can be exposed in two groups with like conditions, as, for example, opening towards a cross draught, which in one case traverses the spray cloud, and in the other does not, and the results compared. The results obtained in some preliminary experiments with this method have been of a very encouraging nature, and it seems that for future experiments the greater convenience of the solid material, which is equally clear and equally putrescible with the liquid media, will banish the latter altogether from use.

Mr Duncan's experiments have been adopted by himself and several of our colleagues as the basis of a modification in their practice; and we have already heard (*Ed. Med. Journ.*, May 1884) of the practical results of the change.

I wish it to be distinctly understood that in this paper no reference whatever can be made to the question as to whether we should or should not continue the use of the spray, as practical surgeons; for though it is true that the changes of method to which I have referred were the outcome of Mr Duncan's experiments, it is with those experiments alone that we have now to deal, and not with deductions from them, and it is their accuracy alone which I have put to the test. Clinical results, by whatever method obtained, are doubtless the only basis upon which the merits of various methods can be decided, but with the present inquiry they have nothing to do.

The point in Mr Duncan's paper which seemed to me of special interest, and on which he laid special stress, was the size of the beakers used. I have experimented with 20 large beakers, and I have been able to preserve 18 of them under the spray without any subsequent alteration. The two beakers which went wrong were exposed respectively for 10 and 20 minutes, and I have already given what appears to me a sufficient explanation of the failure in one of those beakers.

Mr Duncan did not succeed beyond a period of 20 minutes in keeping "a single example unclouded." Every beaker beyond 20 minutes which I have experimented with is now unchanged before you.

I trust that I have to-night demonstrated that the experimental research of Mr Duncan cannot be accepted as a satisfactory scientific basis on which to found any alteration in practice.

The use or disuse of the spray may or may not be justified on other grounds, but it certainly cannot now rest on the results brought by Mr Duncan before the Society in February 1883.

III.—VOLUNTEER MEDICAL ORGANIZATION: WITH SPECIAL REFERENCE TO THE OBJECTS AND AIMS OF THE PROPOSED HOSPITAL CORPS.[1]

By PETER ALEXANDER YOUNG, M.D., Surgeon, 1st Midlothian Coast Artillery Volunteers.

SINCE 1873 our army medical organization has been in a transition state. Previous to that time there were usually three regimental medical officers belonging to each regiment, wearing its uniform, moving about with it, going on foreign service with it, and being as much an officer of it as his combatant brethren were. A staff of sixty or seventy officers existed to relieve regimental officers when they went on leave or were sick. In war time there were regimental hospitals administered by the regimental officers, and on the field of battle the wounded were carried off by bandsmen, who were not specially trained for this work. Barrack hospitals were manned by a sergeant from the regiment and regimental orderlies, who had received no special instruction in the management of the sick. These are the salient points of what is known as the regimental system.

The medical service of the army is no longer regimental, it is departmental. All medical officers of the army belong to the Army Medical Department. They all wear the same uniform, with the exception of twenty-five medical officers of the various household regiments. They are only *attached* to regiments, and may remain at a station when a regiment is removed. In war there are field hospitals for each division of the army, the regimental hospitals being done away with. There is a trained body of men—the Army Hospital Corps—who man station hospitals, or, in a campaign, field hospitals. They are specially instructed in nursing sick, in giving first aid to, and in lifting and carrying wounded. A certain number of these men act as regimental bearers, and, along with surgeons attached to regiments, give first aid to wounded immediately they fall, while others are formed into bearer companies under medical officers, one of which companies is in rear of each division in the field. The regimental surgeon and bearers march on with the regiment when they have given first aid to the wounded, leaving them to the care of the bearer companies, who take them to the field hospitals.

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[1] Since this was written a corps in connexion with the Edinburgh Medical School has been formed, and 215 students are being trained.

Some medical officers are found who advocate the old or regimental system. They say that socially surgeons were in a more comfortable position, being actual officers of the regiment; that they knew their men better, and thus they were in a better position to understand and treat their ailments; and that in war time they were able to manage their wounded as well as now. The defenders of the departmental system argue that the medical officers are now more independent of regimental commanding officers, that in campaigning medical officers can be more easily moved to places where they are wanted, that being a department they are more self-reliant, that the general administration can be more easily managed, and that as under the short service system so many men pass through the ranks, personal knowledge of their medical history is of very little moment.

It has been said that the change from the regimental to the departmental began in 1873. Since then various improvements have been made, and the present organization evolved. It can by no means be said that the present state of the Army Medical Department is perfect, or nearly so. There are many weak points, the most marked, perhaps, being the small number of the Army Hospital Corps, the under manning of the field hospitals, and deficient transport. Time will doubtless improve these points; medical officers will have more authority in their own department, and the medical department be as complete and self-dependent as the engineers or artillery.

Now, let us consider volunteer medical organization, and contrast it with the present Army Medical Department. Practically, in the volunteer army we have the regimental system. Two or three regimental medical officers to a regiment, with the addition that in most regiments there is a trained bearer company, made up of two men for every company or battery; that is to say, only a little better than was the condition of the army in the Crimea.

As at present organized, what would be our position if we were threatened with invasion, and our volunteer army had to take the field? We could expect no aid from the Army Hospital Corps, they being barely sufficient to supply aid to an army corps of 36,000 men. After an action, the wounded being temporarily dressed and conveyed to the rear by the regimental bearers, and the division is ordered to advance, what would become of the wounded? The regimental surgeons and bearers must advance with their regiments, who will now take the wounded?

As we have seen, in the regular army the bearer companies would receive the wounded and convey them to the field hospitals, which are manned by the men of the Army Hospital Corps. But no such organization exists in the volunteer army. Help must be had from some uncertain source, and a miserable breakdown, attended with unnecessary discomfort and suffering, must follow.

which unanimously carried a motion that a volunteer hospital
should be formed in connexion with the Edinburgh Medical
ol, would warrant the hope that this weak point in our volun-
medical department will, at no distant date, be materially
gthened.

is proposed that the members of the corps would be drawn first
medical students, teachers in the school acting as officers.

is corps will be trained first in company drill, and then will
pecially instructed in first aid to, and lifting and carrying
ıded. It will be taught how to pitch and fit out a field
ital, how to nurse sick, how to cook, even lessons in washing
be given, and the arrangements and sanitation of a camp
nstrated. Thus this corps will be able to take the field, to
all necessary aid to the wounded, pitch its hospital tents, well
ed in rendering a camp healthy by having its sanitation
ded to, even, if needful, to cook and wash for the patients,
ell as instructed in the transport of wounded by ambulance
ons and trains.

the meantime this movement has no official sanction, but an
ential deputation has waited on the War Secretary, and was
favourably received, and it is firmly believed that it will ere
be a recognised part of the volunteer force. For the present, a
l subscription from the members and some little aid from those
ested in it will suffice to get the necessary *materiel.* When it has
ved sanction from the authorities, the members will wear the
rm of the Army Hospital Corps, and will get its *matériel* from
ernment. It will have the capitation and proficient grant the same
her volunteer regiments. When the medical schools have taken
he matter heartily, it is proposed to extend the movement to

part of the expenses out of their own pockets. To this there were honourable exceptions, and I was fortunate in having a commanding officer who lent me every assistance. The authorities now have evidently awakened to the fact that they must extend a helping hand; and in an army circular issued by the Secretary of State for War, under date 1st May 1884, there is this order—"That commanding officers will afford medical officers, and others undertaking the duty, every facility for formation and instruction of classes (ambulance)." *Matériel* which up till now has been supplied out of regimental funds, or from voluntary sources, is to be supplied under the sanction of general officers commanding.

It is to be hoped that the new department explained in this paper will soon have the fostering care and support of Government thrown round it. But meanwhile it is the duty of all who would see the medical department of the volunteer service in as efficient state as possible to help forward this cause. Thus only will a disaster be averted, as far as the medical profession is concerned, should our volunteers be called upon to go upon active service.

The following are some of the advantages of the proposed volunteer hospital corps:—

I. Increasing the efficiency of our national defences.

II. Instruction how to obey and command.

III. Military discipline and drill—an agreeable change from mental study.

IV. Special military medical instruction, useful for those who are to become army or volunteer medical officers; and further, of advantage to those who may have to organize similar corps in country districts, or who may have to take part in the formation of ambulances now so general throughout the country.

V. The lessons in cooking and other subjects bearing upon ambulance work must be of benefit in civil as well as in military practice.

IV.—A CASE OF ABSENCE OF THE LOWER END OF THE RECTUM, WITH PASSAGE OF FÆCES THROUGH THE PENIS: SUCCESSFUL OPERATION FOR RELIEF.

By FRANCIS J. SHEPHERD, M.D., C.M., Professor of Anatomy in M'Gill University, Surgeon to the Montreal General Hospital.

IN the March number of the *Edinburgh Journal* I notice the report by Dr Wm. Craig of a case of imperforate anus, in which the rectum communicated with the urinary tract. As Dr Craig states in his paper that he is not aware of any similar case to his own having occurred, and Mr Holmes, when speaking of cases where the rectum communicates with the urinary tract, mentions that he knows of no case where the bowel has been reached successfully through a perineal incision, I thought that it might be of interest to place on record a case similar to Dr Craig's, where operative procedures had resulted favourably. On the 16th of November 1883, Dr Molson delivered a woman of a healthy male child after a tedious labour. Next day the mother told him she noticed something strange coming from the child's penis. On examining the parts Dr Molson immediately recognised the discharge as meconium, and, on further examination, discovered the infant had an imperforate anus. The mother having consented to an operation, Dr Molson requested me to take charge of the case. The patient was admitted into my wards at the General Hospital on 19th November, being then three days old, and having since birth passed a large quantity of feculent matter by the penis. The child, which was strong and healthy, had some distention and tenderness of the abdomen, but very slight fulness of the perineum. There was a well-marked median raphé, and a slight puckered depression at the site of the anus. I decided first to try and reach the bowel through the perineum. After placing the child under chloroform, I made a free incision in the median line, dissecting carefully backwards and upwards in the direction of the rectum, and frequently placing my finger in the wound to feel for fulness or fluctuation. I dissected in this way to a depth of fully 2 inches, when discovering a fluctuating tumour, I punctured it with my knife, and was pleased to see quantities of fæces escaping through the wound. I then enlarged the puncture in the bowel, and without much difficulty drew it down to the external wound, and held it there by catgut stitches.

Almost immediately after the operation the mother removed the child from the hospital, and I did not see it again till 9th June 1884. In the meantime Dr Molson had occasionally visited the case, and instructed the mother, in passing bougies, to keep the anus open. The mother, however, did not attend very scrupulously to directions, and after the operation the opening kept gradually growing smaller. When I saw the child last, it was six months old, and was stout and healthy; the opening had contracted so much that it with difficulty admitted a No. 12 catheter. The mother informed me that the child still occasionally passed fæces by the penis, but only when "opening medicine" was given. I intend, when I can get the mother's consent, to incise the opening, and I shall insist on her passing her little finger twice daily through the anus, as Dr Holmes recommends.

I forgot to mention that the child was the subject of another deformity, viz., absence of the metacarpal bone, and probably the trapezium of the right thumb. It was the mother's fifth confinement; all the other children were born perfect.

In this case it is highly probable that the rectum opened directly into the membranous portion of the urethra, as, if the connexion was with the bladder, it is not probable the bowel would have been reached by a perineal incision.

Dr Craig remarks in his paper that examining the preparation of his case, it is evident that it was possible to pierce the bowel by a trocar or even a bistoury, but he says, "to have enlarged the opening sufficiently to have cut down upon the rectum would have been an operation such as few newly-born children could have survived, and even if the child could have survived, the want of development of the rectum would have prevented a successful issue in this case."

I cannot agree with Dr Craig's conclusions, for, if the bowel is not reached the child will certainly die, and I do not think fear of the severity of the operation should influence the surgeon in his endeavour to reach the bowel; again, as the rectum is pretty movable in the infant it can be brought down, as is shown in my case, even if the lower end is undeveloped.

V.—IMPERFORATE ANUS, WITH OPENING INTO URETHRA.

By D. DUNCAN MAIN.

TWO months ago I had a case of imperforate anus. I cut in 1½ inches without finding the bowel. Being afraid to go any further, I dismissed the patient. The following day they came and told me that the child had had an action of the bowels. Of course I did not believe them, and on making inquiries I found that the child had passed yellow and dark material through the urethra. The child died on the fourth day after operation. I am inclined to think that this was a case similar to Dr Craig's.

VI.—PLACENTA PRÆVIA, ITS PATHOLOGY AND TREATMENT, WITH SOME PRACTICAL REMARKS ON THE OPERATION OF TURNING.

By KEITH NORMAN MACDONALD, M.D., Fellow of the Royal College of Physicians, Edinburgh, etc.

(*Read before the Meeting of the Fifeshire Medical Association, 9th May* 1884.)

MR PRESIDENT AND GENTLEMEN,—It occurred to me, when thinking over what subject would most interest the majority of the members of our Association, that I could not do better than to grapple with one of the most difficult, if not one of the most formidable, class of cases with which the general practitioner has got to deal, and for which he must at all times be well prepared, as these cases generally come like "the thief in the night," when least expected; and as life or death generally depend upon the individual on the spot, nothing but the confidence engendered by knowledge can serve him in the hour of need. If in selecting this subject I have exhibited more courage than discretion, I feel confident that a discussion on the several points raised will elicit some valuable hints from those members who have had greater experience in and better opportunities of studying this "lusus naturæ" than I have had.

Before entering into a consideration of the pathology and physiology of placenta prævia, it is necessary that we should, first of all, understand how it happens that this extraordinary freak of nature comes about for the purpose of destroying that which she generally means to save.

And here I may observe that of all the written descriptions of this abnormal condition with which I am acquainted in our ordinary text-books on midwifery, I consider that of Dr Barnes as being the clearest and the best; and I make no apology for directing your attention to his description of the several causes which lead to this condition.

The pregnant uterus is an ovoid body which is wider at the fundus than at the cervix; and when its internal surface is divided into zones, a very clear conception can be formed of how the placental site indicates danger or otherwise, in proportion as it occupies a position towards the fundus, centre, or cervix of the uterus.

I have here some diagrams which I have prepared, and which I hand round for your inspection. From these diagrams you will observe that the uterus is divided into three zones or regions:—*1st*, an upper polar circle, including the fundal zone, or safe placental seat; *2nd*, an equatorial zone, embracing a safe placental seat at its upper part, or the region of lateral placental attachment; however, attachment in this space *may* give rise to obliquity of the uterus and contained body, and towards its lower part dispose to retention of placenta, tedious labour, and post-partum hæmorrhage; and, *3rd*, a lower polar circle, below which is the cervical zone, or region of dangerous placental attachment.

In this position every placenta, whether consisting in an encroachment downwards from the equatorial zone, or whether it be entire placenta occupying this seat, is liable to previous detachment; for the moment the os dilates, which includes retraction and shortening of the cervical zone, separation of a portion of the placenta takes place and hæmorrhage results.

Now, as to the several conditions which have been alleged by various writers as the immediate cause of the hæmorrhage, the expansion of the cervix is the most plausible; but this can only be partially true, because the hæmorrhage frequently sets in *before* there is any expansion of the cervix,—as, for instance, in the earlier months of pregnancy, and is most common at the menstrual epochs,—the explanation being that at these periods an increased influx of blood takes place to the uterus and placenta.

The ovum and placenta being growing at a greater rate than that of the uterus and its cervical zone, which is not adapted for placental attachment, and the placenta being in a state of hyperæmia owing to its increased growth, it extends beyond the area of its attachments, and breaks away at the margin of the os, giving rise to hæmorrhage.

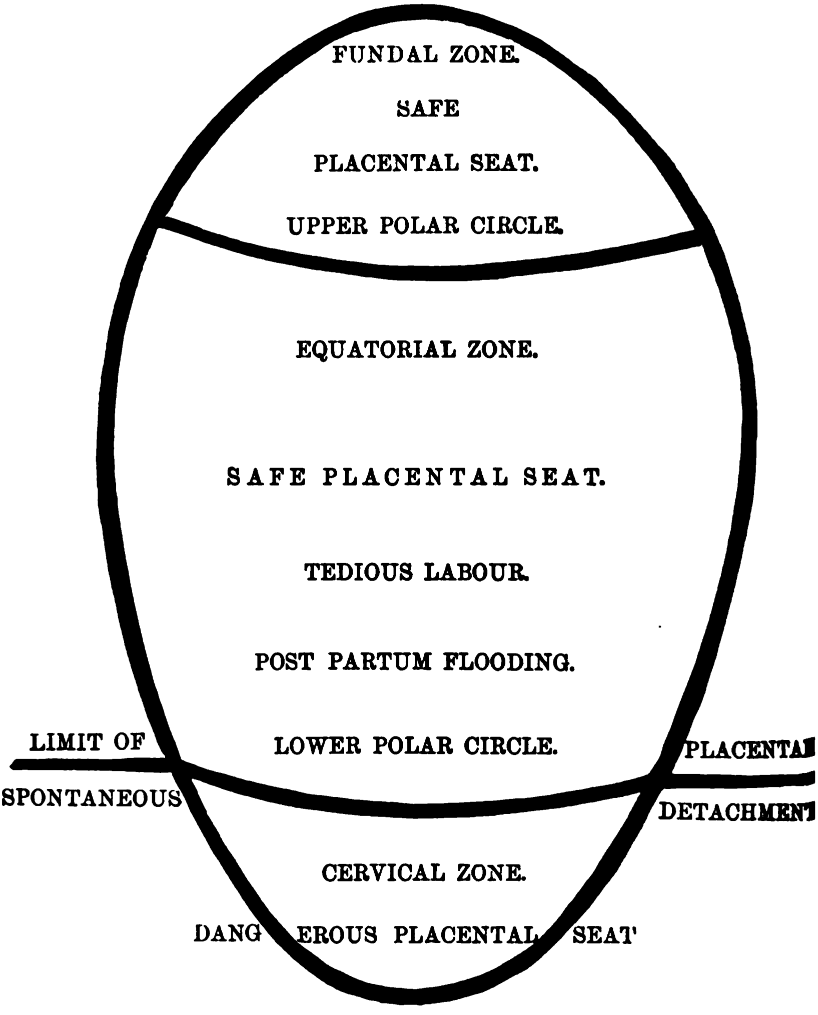

DIAGRAM AFTER BARNES.

When this partial detachment takes place, blood is infiltrated into the substance of the placenta, which increases its bulk still more; and the deposition of blood-clots between the placenta and uterine wall frequently causes contraction of the uterus, retraction of the cervical zone, and further placental separation.

As to the source of the hæmorrhage in placenta prævia, the following facts appear to me to establish pretty clearly that it is in the utero-placental arteries; because, 1*st*, the blood is arterial in character; 2*nd*, that hæmorrhage does not always cease on the total detachment of the placenta, either spontaneously or artificially, if the uterus does not contract; 3*rd*, it has been proved by the Hunters that any great amount of blood cannot flow quickly and in gushes through the placenta; 4*th*, Legroux reported (in the *Archives Gén. de Médecine*, 1855) two cases of fatal hæmorrhage from placenta prævia, in which it had been shown on dissection that the fœtuses had long been dead,—in these the source of bleeding must have been from the uterus; and, 5*th*, the result of experiments bears out this view.

In one case (the late Dr Mackenzie) the pregnant uterus of a bitch was opened and the placenta detached, when arterial blood flowed freely from the uterus; and in another case, after partial detachment of the placenta in a woman, and having injected defibrinated blood into the hypogastric arteries, arterial blood was seen to flow exclusively from the uterus and utero-placental arteries.

As regards the so-called "accidental hæmorrhage," we are usually taught that the bleeding is arrested during a pain, while in placenta prævia the hæmorrhage, though continuing during the intervals, is greatly increased during a pain. This diagnostic point is of doubtful value and apt to mislead, for in some cases of placenta prævia there is no pain; and when pains do occur, they sometimes stop the hæmorrhage, especially in those cases where the placenta dips down to the edge of the os uteri internum. I have seen two cases in which there were no pains, yet a continuous oozing went on in the form of a thin narrow stream of arterial blood trickling down the nates, which would evidently have proved fatal had I not terminated the cases artificially.

Treatment.—In the way of treatment, though, as practical men, we have more to do with general management than with theoretical speculations, yet we cannot afford to ignore the latter, for however perfect we may consider our views as to the treatment of many diseases, if we at all advance with the times, and I am sure we all do, some scientific ogre in the shape of an iconoclast steps in and proves by logic that the "old school" is radically wrong, and straightway proceeds to readjust a proper line of treatment upon what he is pretty sure to term a firm and permanent basis.

The treatment of placenta prævia, however, seems to be pretty permanent at the present day, and without dogmatizing too exclusively, early delivery appears to be about the most rational as it is certainly the most effectual method of arresting the fast ebbing powers of life, and allaying that sickening anxiety which every one must feel who finds himself alone in such an emergency.

In any case of hæmorrhage occurring before the 7th month, I believe that the best plan is to temporize while watching the patient carefully; keeping her strictly in the recumbent position in bed, and administering some sedatives and astringents (though these are too often useless), with cold cloths to the vulva; but if the hæmorrhage should be at all severe, and any sign of uterine action present, no matter what the stage of the pregnancy, the labour must be accelerated. Uterine action is, of course, the best of all hæmostatics, but it is not always present.

After the 7th month, as a rule, there is not much use in delay if the hæmorrhage be severe; then the first and best thing to be done is to rupture the membranes, the uterus being supported externally, and at the same time to apply a binder firmly over the uterus and to give ergot to excite uterine contraction. Some recommend that when the os is undilated and the hæmorrhage severe, it should be plugged, or a laminaria tent introduced. This is all very well when it can be done, but a better method is to use one of Barnes' hydrostatic dilators. I must say, however, that I have experienced great difficulty in using these dilators, and I prefer introducing one or two fingers into the os and sweeping them round in a circle for the purpose of separating as much of the placenta as is within reach, and at the same time exerting lateral pressure on the os uteri to hasten the dilatation. If, on the other hand, the presentation is not a natural one, some recommend the bi-polar method of turning, of which I cannot speak, not having had any experience of its efficacy.

Having therefore determined in any given case that artificial delivery is necessary, the careful and cautious introduction of the hand into the uterus is beyond all measures the most efficient and satisfactory, and I can safely assert, from personal experience, that two or three fingers introduced into the os uteri are the best of all dilators, and when this much is accomplished the remainder of the case, so far as the accomplishment of delivery is concerned, is in the hands of the operator.

The Operation of Turning.—Presuming that the practitioner is called upon, or considers it necessary to perform this operation, I consider the following points worthy of notice:—In the first place, he is probably called away some miles into the country, and having no one to assist him but a couple of useless nervous old women, both his skill and courage are put to the test, and this happening often at night, when proper assistance can't be had, he may consider himself fortunate if he can even procure the aid of a midwife under such desperate circumstances. It has been my lot to have had such cases, and to have listened to a poor woman crying out, "You have done for me," while sympathizing and weeping friends were grasping me by the arm and imploring me to let her alone to die in peace, and yet terminating the case successfully, both as regarded mother and child, without relaxing my hold on what I considered the vital point of the case. Though I have turned without chloroform, it is always best to have the patient put fully under its influence, and the next point is to see that she is placed properly across the bed with the hips well beyond the edge, and the abdomen steadied, and the uterus pressed down by an attendant in the bed. The operator should not move *one step further* until the above preliminaries are completed. So long as a man has got the use of his right hand there is no occasion for his following the example of those ambidextrous gentlemen who profess to be so successful in using the left hand, as the pelvic curve can be taken just as well with the right, and it is stronger and better adapted for the work in hand in every other respect. On getting the fingers in the shape of a cone into the os uteri, they should be retained for some time *in situ*, the uterus being still pressed down externally, until the hand is admitted into the cavity of the uterus, passing through the placenta if necessary. After feeling the smooth internal surface of the uterus, the feet are to be searched for, and, as we are usually taught, one brought down. I prefer bringing down both feet when they can be readily found, which is not always easy, but once found the operator can take a rest, as the worst part of his task is now over, and it only requires a little patience and care in completing the case in the usual manner.

I am trespassing too much upon your time. I fear that I have already exhausted your patience, and that you have had quite enough of the subject without my entering into the question of the so-called "accidental hæmorrhage," so I will conclude by merely drawing your attention to the importance of maintaining artificial respiration for half-an-hour in cases of suspended animation after turning, for I can point to one case at least where I thought the child was dead, and handed it over to an assistant who kept up artificial respiration for twenty minutes, while I was attending to the mother, with the result that its life was saved by mere accident.

VII.—CASE OF ABDOMINAL WOUND, WITH PROTRUSION AND WOUND OF SMALL INTESTINE, THE RESULT OF A STAB: RECOVERY.

By C. Clark Burman, L.R.C.P. & S. Ed., Belford, Northumberland.

At 10.15 on New Year's eve I was called to see J. P., aged 41, who was said to have been stabbed during an altercation consequent on the removal of a man from an inn at the hour of closing. I found my patient sitting on a bench in the kitchen, extremely pale and cold, evidently suffering from shock, his trousers and waistcoat, which had been unloosed, were saturated with blood, and a considerable quantity was also on the floor near the place where he was sitting. I laid him down upon the bench, and, upon examination, found protruding from a wound in the abdominal wall a considerable portion of the small intestine, which, upon subsequent measurement, proved to be about two feet. Profuse hæmorrhage of a venous kind was still going on; this I traced to a wound of the mesentery, involving a vessel of considerable size, which I at once ligatured, as well as a smaller one which was bleeding freely. The mesenteric wound was triangular in form, the sides being about ¾ inch in length, and, strange to say, only one layer was divided and turned back like a flap; this I replaced in position, and secured with several sutures. A careful examination of the protruded bowel revealed wounds in three places; in each case all the intestinal coats were divided. Two of the wounds were at the upper portion and upon opposite sides of the bowel, near the mesentery; the third was about 1½ foot further down; the two upper were ½ and ¾ inch in length respectively, almost directly transverse to the axis of the bowel, their edges were closely approximated, the lower was smaller, about ⅓ inch, but much more oblique, and the mucous coat was pouting through it; from this wound slight extravasation of the intestinal contents had taken place. I closed the three wounds by means of closely-placed interrupted sutures of very fine twisted silk, bringing their peritoneal surfaces in apposition, in order that adhesion might more readily take place, and thus lessen the risk of extravasation. I question if my attempt to pass the needle through muscular and peritoneal coats only was as successful. After making a thorough re-examination, and no other injury being apparent, except several slight extravasations of blood between the layers of the mesentery, I washed the protruded bowel very carefully with a weak solution of glycerine of carbolic acid in water, and then proceeded to return it into the abdomen. Some little difficulty was experienced, since the bowel had become œdematous, but by careful manipulation I succeeded, without having to enlarge the external wound, by gently pushing back the upper portion first, and then the remainder. This having been accomplished, I examined the opening in the parietes; it was a clean incised wound, nearly two inches in length, situated to the left and a little below the umbilicus, about midway between it and the anterior superior spine of ilium; its direction was oblique from below upwards and inwards towards the middle line, dividing the three expanded abdominal muscles completely, and a portion of the external edge of the rectus abdominis, the latter upon a higher level than the skin. These transversely cut fibres had retracted for a considerable distance, leaving a hollow beneath the skin above the external wound; the peritoneum was divided also on a higher level than the skin. At the lower extremity of the wound (where the instrument must have entered) the skin, muscles, and peritoneum were divided at the same level. Bleeding from the muscular walls had ceased, due, I presume, to the contraction of their fibres, and no vessel required ligature. I pressed a quantity of sanguineous fluid from the abdomen through the wound, and, after carefully sponging the wound and surrounding parts with carbolic lotion, I introduced three strong silver-wire sutures through the whole thickness of the walls, including the peritoneum, and seven silk sutures through skin and subcutaneous tissues only, in the intervals. I thought at first of extending the wound in the skin upwards, so as to enable me to approximate the edges of that portion of peritoneum situated above this level, but the condition of the man seemed urgent; and having vomited once or twice, thus endangering the integrity of the sutures already introduced, I decided upon leaving it, and completed the dressing; no drainage tube was inserted. The wound was dressed with lint soaked in glycerine of carbolic acid, over this absorbent cotton-wool sprinkled with carbolic lotion, and then a binder extending from the lower ribs to the trochanters, and secured by means of stout pins. He was then divested of his clothes, carried upstairs, and put to bed, with hot-water bottles to his feet and legs, which were quite cold.

Owing to the inconvenient position of the man (for I had never moved him from the bench), the bad light (supplied by a person holding a candle), and the complicated character of the injuries, some time elapsed before the operation was completed, during which period the patient was perfectly conscious; the attacks of vomiting, also, interfered with my progress, obliging me to support the abdomen, having covered the bowel with a cloth soaked in dilute carbolic lotion each time it came on, so as to prevent further protrusion.

The exceedingly grave nature of the injuries, and the condition of the man, necessitated the taking of his depositions, and a magistrate was sent for; but the extremely violent conduct of his assailant, whom I visited in the police cell, obliged me to advise that his presence would be dangerous to the injured man, being likely to excite him, consequently a statement on oath was all that could be secured.

Almost immediately on seeing him I gave 2 grs. opium by the mouth, and I wished to administer more, as I expected the previous dose had been rejected during one of the attacks of vomiting, but being anxious that he should make his statement first (and he complained of very little pain), I waited, and, so soon as the magistrate was finished, I gave a hypodermic injection of a combination of ¼ gr. morphia, and $\frac{1}{120}$ gr. atropia. No catheter was needed, as he voluntarily passed a considerable quantity of urine shortly after being put to bed.

I left him at 4 A.M. with a pulse of 84, and the warmth of the extremities returning; he felt no pain, and expressed himself as feeling very well, and had a most hopeful idea of his ultimate recovery. I ordered small quantities of milk and soda-water, and no other kind of food whatever; 1 gr. opium to be taken every three hours.

Since the injection of morphia and atropia no more sickness had occurred, and my anxiety about the ligatured vessels was very much relieved.

I visited him again at 8.45 A.M., and found reaction thoroughly established; pulse 84, temperature normal. He had slept quietly, there had been no vomiting, and he said he felt quite comfortable. The abdomen was tympanitic upon percussion, but beyond feeling the bandage somewhat tight, he complained of no pain. He had, just before my visit, passed a fair quantity of normal urine without any inconvenience. At 1.20 P.M. I again saw him; pulse 84, somewhat soft, but fuller than in morning; temperature normal, but body wet with perspiration, especially hands and face; no pain; has passed urine freely; tendency to vomit, but it soon subsided. At 2 P.M. the prisoner, having calmed down, was ordered by the magistrate to be brought to the house of the injured man, and in his presence the depositions were taken in a formal manner. Every possible precaution was observed, so as to avoid any excitement on the part of my patient, who made his statement clearly and without any hesitation. At 7 P.M.—Pulse stronger, 72; temp. 99°. Passed urine once or twice since last visit; tympanitis marked, but no pain; some flatus passed per anum; skin not so moist.

Jan. 2nd, 9.20 A.M.—Pulse 72, firm and stronger, not hard or wiry; temp. 98°·9; had slept well during first part of night. For the first time he complains of a little pain in neighbourhood of wound, but only occasionally, and never severe; abdomen less tense, flatus still passing; urine has been passed at frequent intervals without difficulty or pain; no headache, pupils not at all contracted. 2 P.M.—Pulse 72, temp. 99°; skin moist; less pain; has passed urine and flatus at irregular intervals; abdomen less tympanitic. 8.15 P.M.—Pulse 68, temp. 99°·5; pain gone; urine and flatus passed freely; tongue moist and clean; skin moist; abdomen slightly more tympanitic than at last visit.

Jan. 3rd, 9.20 A.M.—Pulse 72, temp. 98°·6. Has had a good night; no pain; passed urine and flatus frequently; tongue and skin moist; has taken lime-water instead of soda-water with his milk; abdomen still tympanitic, but not excessive or disturbing to patient. 2 P.M.—Pulse 68, temp. 99°; condition unchanged. 7.30 P.M.—Pulse 72, temp. 100°·3; passes urine and flatus; no pain or headache; tongue and skin moist.

Jan. 4th, 9.30 A.M.—Pulse 84, temp. 99°·2. Had a very good night, free from pain, except once, when some flatus was passing; urine free. 2 P.M.—Pulse 78, temp. 99°·2. Passed urine and flatus freely without pain. Noticing some serous oozing through the dressings, I removed them and dressed the wound for first time; there was a good deal of plastic exudation around the wound extending 1½ inch in every direction; with the exception of the upper wire suture, which had been too slack, the wound looked exceedingly well,—for the lower two-thirds it was quite dry, but at the upper part, corresponding to the slack wire suture, a small quantity of bloody serum was escaping, evidently from the cavity caused by the retraction of the divided rectus under the skin; it was perfectly free from odour; a slight inflammatory blush was noticed along the edges of wound. There was really very little abdominal distension, and no pain felt upon pressure, except in neighbourhood of wound. The wound was dressed as at first, and the abdomen painted with fluid belladonna plaster, covered with cotton-wool, and a binder reapplied. He continues taking milk and lime-water, with barley water for a change; urine fair in quantity, but somewhat high coloured. 8.30 P.M.—Pulse 72, temp. 100°. Is much more comfortable since the wound was dressed; complete freedom from pain; passed urine twice since last visit and some flatus; skin not so moist as in morning; tongue clean and moist; no headache, and no contraction of pupils.

Jan. 5th, 9.15 A.M.—Pulse 72, temp. 98°·6. Has slept almost all night; is free from pain; has passed urine and feels as though the bowels would be moved; abdomen not distended. I notice slight staining of the dressings with coloured serum, but not sufficient to justify dressing again. 2.15 P.M.—Pulse 84, temp. 100°1. Bowels have been moved for first time, a fair amount of semi-solid fæces, no blood or anything abnormal. I had warned him in the morning about straining should the bowels be moved; he felt some pain in passing urine at the time the bowels were being moved, but none before or since. No complaint of pain nor any anxious expression. 8.15 P.M.—Pulse 84, temp. 100°·6. Abdomen slightly distended and tympanitic; slight pain occasionally in *right* iliac region. Bowels moved again, in amount and colour much the same as previous motion; passed urine several times, slight pain on commencement of the act of micturition; skin moist; tongue clean and moist. Dressed wound for second time owing to increased serous oozing; I found it coming entirely from the upper part of wound, most probably from broken down blood-clot in the cavity already alluded to; the wound is united in its entire length except ¼ inch at upper part; I removed the upper and lower wire sutures, painted the abdomen with fluid belladonna plaster, and dressed as before. The serum on the lint was perfectly odourless.

Jan. 6th, 10 A.M.—Pulse 84, temp. 99°·4. Had a very good night; the pain in right iliac region has completely disappeared; there is no complaint of any pain, but slight interference with passing urine; he says "he has to wait for it coming;" in quantity and appearance the secretion is normal. Bowels moved at 4 A.M. without any pain or uneasiness, motion semi-solid, contains no pus or blood; a large quantity of flatus passed at this time; abdominal distention absent; tongue clean and moist; skin perspiring freely; no headache, but I observe a somewhat anxious expression, though he says "he could scarcely tell he had a wound." 1.45 P.M.—Pulse 72, temp. 98°·8. Perfectly free from pain; micturition much freer. 7.30 P.M.—Pulse 84, temp. 99°·6. Continues free from pain.

Jan. 7th, 9.45 A.M.—Pulse 84, temp. 100°. Has had a restless and sleepless night with a good deal of wandering; he complains of no pain but a general soreness over abdomen upon slight pressure; abdomen not tense; has passed flatus, but urine "long in coming." I ordered him, for the first time, a tablespoonful of whisky in milk, to be repeated at 11 o'clock in order to induce sleep. 1.45.—Pulse 84, temp. 99°·7. Still wanders; had slept about a quarter of an hour, but perspired profusely; no pain is complained of. Up to the present time he has taken, when not asleep, 1 gr. opium every three hours; I now withdrew it, but left instructions for it to be given again if any pain was felt. His face is haggard looking, and his expression anxious, though he is cheery when spoken to. Gave him ℥ss. whisky. 8 P.M.—Pulse 80, temp. 100°. Bowels moved twice this evening without any pain; 1st motion was semi-solid, accompanied by a large quantity of flatus; 2nd motion softer; no pus or blood in either. There is still some mental confusion; he has illusions and speaks freely about them, correcting his attendants if they do not represent them as seen by him; he admits some are delusions, others he maintains are positive facts; he mutters to some of these imaginary persons and gives them instructions, but has not attempted to move about. His pupils are more dilated than yesterday; passes urine without pain, but still complains of the delay at the start. I dressed the wound, removing the last wire and two of the silk sutures; a considerable quantity of bloody serum escaping from the upper portion of wound; no pus; the lower portion of wound almost entirely healed; the glycerine of carbolic acid having produced one or two small erythematous patches, I reduced its strength. Abdomen somewhat distended, and a tympanitic note elicited upon percussion close up to the wound. Ordered ℥j. whisky in milk. Has only had 3 grains opium during the day.

Jan. 8th.—I was called up at 6 A.M., owing to his delirium becoming active; wants to get up and dress; has had his legs once or twice over the bed, persists in sitting up; has had gr. j. opium and ℥ss. whisky during night. Pulse 84, temp. 99°. There has been a frequent desire to have bowels moved; once he passed a little mucus, but no fæces. Gave hypodermic injection of ¼ gr. morphia and ℥ij. whisky in some beef-tea. 8 A.M.—Again sent for, since his persistent movements and efforts to get up continue; gave him gr. j. opium and some milk and lime-water; though frequently conversing with imaginary persons, if asked a question he answers perfectly rationally; passes urine with less difficulty; there was no pain or tenesmus accompanying the frequent desire to have bowels moved, but flatus constantly passing; abdomen less distended. Pulse 84, temp. not taken. 9.45 A.M.—Pulse 84, temp. 98°·6. Delirium less active, but continues talking almost incessantly; on being questioned complains of no pain. Ordered ℞ Ammon. carb.

ʒj., Tinct. digit. ʒj., Tinct. cinchon. co. ℥j., Aqua ad ℥viij. ℥j. ter in dies. 2.30 P.M.—Pulse 84, temp. 99°·8. Lies quiet, but talks a good deal; has had a little sleep, expresses himself as feeling better; no headache; tongue moist and clean; is troubled with flatus passing frequently, accompanied by small quantity of mucus; gave 1½ grs. opium and ℥j. of mixture. 7.15 P.M.—Pulse 96, temp. 101°·2. Delirium more active during last hour or so, but previous to this he had lain quiet. Complains of pain in right side of chest; auscultation reveals slight friction sound; respirations, twenty; I painted this part with emp. bellad. fluid. The dressing having been displaced during his repeated movements, I changed them, and removed all the sutures except one in the middle; the upper extremity of wound for about ¼ inch is ununited, and from it continues the discharge of thin coloured serum free from odour; the skin round this upper portion of wound is slightly red and somewhat œdematous, but no signs of fluctuation; applied long strips of plaster, and dressed with carbolic solution. He had ℥j. whisky at 4 P.M., and has drunk freely of beef-tea and milk; tongue moist and clean; no other complaint of pain except in right side of chest, and this only upon deep inspiration. Gave gr. ij. opium and ℥ij. whisky. 10 P.M.—Pulse 96, temp. 100°·2. Pulse decidedly firmer and stronger; has been quieter, though talking freely. Bowels have just been moved, motion small, consistence semi-solid, no pus or blood; from the character of this motion I am satisfied that it has passed the wounded portion of bowel. Has passed urine; skin perspiring freely; tongue moist; pupils not contracted; answers any question put to him quite clearly. Gave him hypodermic injection of ⅙ gr. morphia and ℥j. of mixture, as he had not slept since last visit.

Jan. 9th, 9.30 A.M.—Pulse 84, temp. 100°. Condition much improved; he slept for an hour and a half after hypodermic injection last evening; had some whisky and milk, and then slept till 4.30; some more whisky and beef-tea, and slept till 6 A.M. He expresses himself as much better and refreshed after the sleep; pleuritic pain almost gone; passed urine much more freely. Bowels moved twice, motions semi-solid, no pus or blood, but a small quantity of transparent coagulated mucus, distinct from motion. No abdominal pain, very little distention. Tongue clean and moist; has been perspiring very freely. Pulse much stronger, pupils normal. Gave ℥j. whisky, and ordered ℥j. mixture at 11 o'clock. 2 P.M.—Pulse 84, temp. 99°·8. Slept most of the morning; is now perfectly quiet and seldom wanders. Bowels moved again, quite natural; abdomen less distended; perspiring very freely. 7 P.M.—Pulse 84, temp. 100°·7. Slight action of bowels, no pain; still sweating profusely. 10.35 P.M.—Pulse 84, temp. 100°·4. Troubled with frequent desire for movement of bowels; very small quantity of fæces, but much flatus; abdomen considerably distended and very tympanitic; no headache or pain; gave gr. ij. opium and ℥ij. whisky.

Jan. 10th, 9.30 A.M.—Pulse 84, temp. 99°·4. Slept the whole night except for a few moments at 4 and 6 A.M.; bowels moved slightly, no pain; passes urine freely; tongue clean and moist; profuse perspiration; he had ℥j. whisky during night in milk. I gave him now gr. j. opium and ʒiss. whisky, ℥j. mixture at noon. 2.45.—Pulse 78, temp. 99°·2. Passes urine and flatus freely; has slept a good deal; perspires freely; gave ℥j. whisky. 9 P.M.—Pulse 78, temp. 100°·6. Bowels moved slightly at 4 P.M., thin, with this mucoid jelly in small quantity; no pus or blood. Had ℥j. whisky at 6 P.M. I dressed the wound and removed last suture; a small portion of the free edge of upper extremity of wound has sloughed, about half-an-inch square; slight sero-sanguinolent discharge continues from upper portion only, lower part quite united, except small orifice where suture was removed; tympanitic note clear and distinct all round the wound, especially at upper part, I tried to bring skin as close over the place where slough had separated by means of strapping. Abdomen still distended; urine free; tongue clean and moist. Gave gr. j. opium and ʒiss. whisky.

Jan. 11*th*, 9.20 A.M.—Pulse 84, temp. 99°·5. Slept well, but had movement of bowels three times at short intervals during night, motions semi-solid, fair quantity and some mucoid jelly; has passed a large quantity of flatus; abdomen so much less as to necessitate rearrangement of binder I had applied after dressing last evening; had ℥j. of mixture at 4.30 A.M. and gr. j. opium at 8 A.M. I now gave him ℥j. whisky. 7.30 P.M.—Pulse 72, temp. 100°·4. Slept well during morning, but has been greatly inconvenienced during afternoon with constant desire for movement of bowels; considerable number of motions, eight or nine; fæces frothy; small quantity of "jelly;" there is no pain or tenesmus, but flatus passing freely; urine not so free; skin less active; gave. gr. j. opium on account of intestinal irritation, to be repeated at 4 A.M. if it continued. Has taken milk and lime-water freely, the quantity of latter to be increased; had corn flour for supper, and ʒiss. whisky.

Jan. 12*th*, 9.45 A.M.—Pulse 76, temp. 99°·7. Slept very little owing to the bowel irritation; very little fæcal matter passes, but there are some shreds of mucus and large quantity of flatus; he had gr. j. opium at 3.30 A.M. and ℥j. mixture. Urine has been troublesome. Has had corn flour for breakfast, gave gr. j. opium and ʒiss. whisky, and discontinued the mixture, thinking, perhaps, the ammonia kept up the bowel irritation, and ordered a teaspoonful three times a day of a mixture of bismuth subcarb. and powdered wood charcoal; first dose taken at 11 A.M.; to have gr. j. opium and ʒiss. whisky at 1.30 P.M. 8.45 P.M.—Pulse 72, temp. 100°. Bowels less troublesome in morning, but more so in afternoon; a fair quantity of semi-solid fæces have been passed, and a large quantity of flatus. Urine much freer; has slept a little during afternoon. Dressed wound; the surface from which the small slough had separated is granulating nicely, discharge trifling, lower portion quite healed, tympanitic note elicited close up to wound. Strapped with plaster and dressed as before. Arrowroot for supper. At 10 P.M. I gave hypodermic of ¼ gr. morphia and ℥iss. whisky.

Jan. 13*th*, 9.45 A.M.—Pulse 84, temp. 99°·6. Slept until one o'clock; had some milk and slept again till four; had gr. j. opium and charcoal powder and some milk, and slept again until 6 A.M.; had corn flour for breakfast; slight movement of bowels at 9.30 A.M.; only mucus passed; urine not so free. Gave ℥iss. whisky in milk. Bowels moved at 11 A.M., fair quantity of semi-solid fæces. Corn flour to dinner and ℥j. whisky. Bowels moved again at 1.30, showed distinct traces of charcoal (26½ hours since first dose was taken); small quantity of fæces and some flatus passed. 6.30.—Another motion, quantity of fæces much larger and somewhat inspissated, quite black from charcoal. Urine much freer. Passed large quantity of flatus, so much so that bandage had to be tightened. Corn flour for tea. 8.30 P.M.—Pulse 84, temp. 100°. ℥j. whisky in milk at bedtime; has had no opium to-day.

Jan. 14*th*.—Has slept well, awoke at 2 A.M.; had a glass of milk, bowels moved, fair quantity of black fæces; slept till 6 A.M.; had beef-tea; another motion same as before; slept until 8.30. Corn flour for breakfast. 9.30 A.M.—Pulse 96, temp. 99°·7. Has a slight cough with mucous expectoration; had ℥ss. whisky, to be repeated at noon. 8.30 P.M.—Pulse 84, temp. 99°·6. Has had a quiet day, but no sleep; coughed occasionally; ordered ℥ss. of ammonia mixture. Bowels moved at 4.30, small quantity of fæces, but flatus abundant; urine free. Has felt dull to-day, but no pain or headache. Dressed wound, upper part granulating nicely, discharge trifling, no appearance of fistula forming where slough separated.

Jan. 15*th*.—Has slept well, awoke at 12.30; bowels moved slightly; had ℥ss. whisky and milk; slept till 5.15; bowels moved again; had a dose of charcoal powder; slept till 7. Arrowroot for breakfast. Cough less troublesome; urine free; bowels moved slightly, very little fæces, but a good deal of mucus. 9.20.—Pulse 78, temp. 99°·6. Perspiring freely, feels hungry; had ℥ss. whisky, and again at noon. Bread and milk for dinner, which relieved the hungry sensation. Bowels moved at 4 and 6 P.M. Cough less troublesome. 8.30 P.M.—Pulse 84, temp. 100°. Not perspiring so much; ℥ss. whisky at bedtime.

Jan. 16*th*.—Very good night. 9.40 A.M.—Pulse 76, temp. 99°·1. Bowels moved at 2 A.M., small quantity of fæces, but about ℥iss. clear "jelly" passed with it. Again at 12 noon, 3.30, and 8 P.M., "jelly" with each motion. 8.30 P.M.—Pulse 72, temp. 99°·8.

Jan. 17*th*, 9.45 A.M.—Pulse 72, temp. 99°. Bowels moved at 12 A.M., 4 A.M., 2 P.M., 8 P.M., still passes "jelly" with motions. Dressed wound, upper part contracting nicely, looks very well indeed.

Jan. 18*th*, 9.40 A.M.—Pulse 84, temp. 98°·8. Slight motion at 3 A.M. and 6 A.M., contained "jelly." 4 P.M.—Another motion, but free from "jelly;" had fish to dinner 8.20.—Pulse 76, temp. 99°·7.

Jan. 19th, 9.30.—Pulse 76, temp. 99°·2. No motion until 6 P.M., which was copious, semi-solid, and free from "jelly." Had tripe with white sauce and bread and butter for dinner. 8.45 P.M. —Pulse 72, temp. 99°.

Jan. 20th.—Good night. 9.50 A.M.—Pulse 80, temp. 98°·6. Dinner same as yesterday. I dressed wound at 2.15; it is almost all healed, the small granulating surface at upper part quite level with surrounding skin; after dressing in usual way I put on a strong abdominal belt, kept in position by straps over shoulder, and got him up into chair for an hour for first time; he felt perfectly easy and comfortable. 5 P.M.—Bowels moved satisfactorily. 7.40.—Pulse 72, temp. 100°·2.

Jan. 21st, 9.30 A.M.—Pulse 78, temp. 98°·6. Good night. Bowels moved at 8 A.M. and 7 P.M. quite natural. Egg and milk custard for dinner. Was up for 1½ hours in afternoon and again for an hour in evening. 8.45.—Pulse 96, temp. 99°·4.

Jan. 22d, 9.30.—Pulse 78, temp. 98°·6. Moved him to-day to the Workhouse Infirmary. 8·45 P.M.—Pulse 84, temp. 99°·7. Dressed wound, quite healed, upper part looking sound and firm. No movement of bowels to-day.

Jan. 23rd, 9.30.—Pulse 84, temp. 99°·2. Bowels moved slightly at midnight, and again freely at 8 A.M., and again slightly at 6 P.M. Had beef-tea and bread with egg pudding for dinner. Has been up a good deal to-day and walking about. 9 P.M.—Pulse 72, temp. 99°·7.

Jan. 24th, 10.45 A.M.—Pulse 72, temp. 98°·4. Slight motion at 8 A.M. Tripe to dinner. Has been up three times to-day. 9 P.M.—Pulse 72, temp. 99°·.

Jan. 25th.—Bowels moved at 8 A.M. Tripe for dinner.
Jan. 26th.— „ „ „ Fish for dinner.
Jan. 27th.— „ „ „ Tripe for dinner.
Jan. 28th.— „ „ at noon. Fish for dinner.
Jan. 29th.— „ „ 8.30 A.M. Minced beef for dinner.

Examined wound; perfectly healed and quite dry.

Feb. 21st.—Having commissioned Messrs Hooper & Co. to make a broad bandage for him, with a plate sufficiently large to cover and protect the wound and at the same time prevent the formation of a hernia at the spot, I applied it. I find the wound is firmly united, with no tendency to bulge upon coughing, though a very small amount of thickening is perceptible in the neighbourhood of wound. With this well-fitting bandage I trust he may be able to do some work of a light nature, since he cannot with safety to himself resume his former occupation of labourer.

The alarming fatality attending injuries of the abdomen, more particularly when complicated with protrusion and wounds of its viscera, is so well known that the report of a case terminating in recovery is worthy of publication upon this ground alone; in addition, it proves that even in apparently the most hopeless cases we should never despair, but use every means in our power to do the utmost for such cases, so long as our efforts do not tend to increase the risks which these unfortunates must inevitably run. The case just recorded presents several points of interest. Not only did it terminate in recovery, but it was unattended by the almost invariable accompaniment, peritonitis; not once during the whole progress of the case was the catheter required, and the temperature never rose above 101°·2, and reached that only upon the evening of the day when delirium was most active; in fact, had it not been for this attack of delirium, which in my opinion was purely nervous in its origin (the man having been addicted to the habitual use of alcoholic liquors), there would have been as little, if not less, disturbance than we frequently observe after injuries regarded as trivial. There is no doubt that though the aspect of the case was so grave as to be deemed almost hopeless, there existed certain elements which would tend to a favourable issue; these were found in the nature of the wounds. The most serious hæmorrhage occurred from the vessel divided by the mesenteric wound. In all probability protrusion took place immediately after the injury, consequently there would be little bleeding into the peritoneal cavity, while the same circumstance would prevent any pollution of the peritoneum by intestinal extravasation, but the transverse nature of the two large wounds of the bowel would be the greatest safeguard against this; it was only from the lower wound, which, though smaller, had an oblique direction, that I noticed any extravasation had occurred. The prompt attendance, preventing the dangers of long continued hæmorrhage or exposure of the protruded bowel, with its consequent œdema and partial strangulation, were also favourable to the patient.

I am inclined to the opinion that it was a portion of the jejunum which was injured, and this opinion is strengthened by the perusal of Treve's excellent manual of *Surgical Applied Anatomy*. At page 305 he writes, "When the small intestines are exposed by accident or operation, it is often difficult, especially when there is abdominal disease, to recognise the upper from the lower part of the gut. It may be noted, however, that the coils of the jejunum occupy mainly the left lumbar and left iliac regions and a part of the umbilical area, while the ileum occupies rather the right lumbar and iliac regions, the hypogastric area, and a part also of the umbilical. The jejunum is wider than the ileum, and its coats thicker and more vascular." This seemed quite apparent, and though I could not detect the valvulæ conniventes owing to the intestine being somewhat full, yet the width of the bowel and the thickness of the coats of the portion protruded quite coincided with the above description; the lacteal vessels were beautifully distinct, meandering towards the mesentery.

The first movement of the bowels took place upon the 5th

January, but I consider that it was only the contents of the bowel below the seat of injury, and it may appear somewhat strange that the full doses of opium which he was taking had not prevented this; but the explanation lies, I think, in the fact that absorption of belladonna from the fluid plaster with which I had painted the abdomen had taken place and counteracted the constipating effect of the opium, and it was not until the 8th January that I could say positively the canal was pervious at the seat of injury, for only at this time did the motions assume the characteristic appearances of an entirely milk diet, while this was definitely settled when the motion on the 13th contained charcoal, the first dose of which had been given on the 12th.

The passage of the transparent mucoid jelly, perfectly distinct from the motions, which continued for several days, I cannot quite account for, except upon the assumption that some irritation of the mucous membrane resulting from the carbonate of ammonia had induced it; certainly the bismuth and charcoal subdued it, which is in favour of this assumption.

The nature of the delirium calls for some remark. He had received no stimulant whatever from the time of the accident. On the 6th I perceived a somewhat anxious expression, and on the 7th he first wandered, talking to imaginary persons and seeing imaginary objects, but there was no muscular tremor or apprehensions of danger or fear on his part. I then gave him some whisky, and as the delirium became more active I increased the quantity, and in addition ordered the ammonia and bark mixture with the most satisfactory result. Its appearance took place about the time when delirium shows itself, after surgical operations, in those who have been addicted to the habitual use of alcohol; but his temperature on the 7th, when he first showed any mental disturbance, never rose above 99°·6, and on the 8th, during the most active period, it only reached 99°·8; but on the evening of that day it was 101°·2 (the highest temperature registered), the delirium was much less active, and I attribute this extra rise to the slight pleurisy, due, I expect, to the exposure consequent on his movements when the skin was so active, which fully proves its nature was not inflammatory or yet septicæmic.

The absence of peritonitis is remarkable considering the character of the injury, and cannot be explained upon the ground of strict antiseptic precautions. I certainly used every endeavour to thoroughly cleanse the bowel before returning it, but no spray was used, or in fact any special antiseptic precautions beyond that strict attention to details, cleanliness, etc., which are applicable to every variety of wound. I did not use a drainage tube, as I feared the pressure of it against the subjacent bowel might lead to the formation of a fistula, an occurrence I was particularly anxious to avoid.

The propriety of enlarging the wound in the skin, so as to correspond with that of the deeper structures at the upper portion of wound, and permit closer adaptation of the peritoneum at this spot, was discussed in my own mind, but I resolved not to enlarge it, because the condition of the patient at that time was critical, and being at the upper and not the lower part, there would be less danger of protrusion, and so I came to the conclusion to pass the first wire peritoneal suture as high up as I could, and trust to the exudation of plastic lymph to do the rest. The result has been perfectly satisfactory so far, though perhaps the liability to a hernia at this particular spot may be greater than in the line of the wound, but the plate which I have fixed to the abdominal bandage will, I trust, minimise this danger or prevent it entirely.

VIII.—FIBRINOUS POLYPOID UTERINE TUMOUR; SECONDARY HÆMORRHAGES; REMOVAL OF TUMOUR.

By A. D. Leith Napier, M.D., etc., Dunbar, N.B.

(*Read before the Edinburgh Obstetrical Society, 14th May* 1884.)

Narration of Case.—Mrs Frank M., wife of actor, ætat 22; pale little blonde, secundipara; was easily and naturally delivered of a healthy female child on 30th May 1881. The placenta came easily and was entire; the membranes untorn; the placenta in size seemed rather small, but appeared quite healthy. Mrs M., originally a weak fragile woman of nervous temperament, had been confined of her first child 16 months prior to the second delivery. She nursed her first baby 9 months. Lochia lost colour on fourth day. Mother nursed child; milk sufficient. Pulse and temperature, normal; average, 80 and 98°. In consequence of her husband's pecuniary embarrassment at time of her confinement, she had no regular nurse, and possibly exerted herself more than was prudent from the very first. However, she did exceedingly well up to 9th June (the eleventh day). She rose on that day, but did no house work. In the evening she carried her little boy across the room, and thoroughly washed him; she felt very tired after doing so. Between three and four hours after this bleeding began. I was sent for about 11.30 P.M. On visiting, I found my patient reclining in an arm chair, in a profound faint; no pulse at wrist; face pallid as death. The quantity of blood lost was very great; but as she had been sitting up fully dressed when hæmorrhage commenced, it was impossible to estimate how much, even approximately. The whole of her clothing from below the waist was saturated; the chair, covered with leather cloth, contained a large pool; and from it the blood had streamed over the floor. The faint lasted for several minutes after my arrival, although, on my seeing her, she was immediately placed flat on the floor with her head low. Upon recovering consciousness, the clothing was removed, and she was gently lifted into bed.

On examination, the vagina was filled with clots, as was also the lower uterine cavity; two fingers could be easily introduced within the os. The uterus felt about the size of a fœtal head. By external and internal manipulation, many clots were removed; the uterus contracted, and was fixed by a pad and roller. The following was prescribed,—

℞ Ext. ergotæ liquid, . ℥j.
Tinct. hamamelis, . ℥ss.
Aq. . . *q.s.* ad, . ℥ij. M.

Ft. mist. Sig. *Two teaspoonfuls at once, and one teaspoonful every 2 or 3 hours.*

Cold water cloths were applied to the vulva for an hour and a half. After remaining an hour, I felt satisfied that bleeding was checked, and left.

During the night and next day several small clots were passed, and about six or eight napkins used.

On *June 11th*, two or three cloths were required; on the day following, the discharge ceased. Mrs M. continued to nurse her baby, but was strictly enjoined to maintain the recumbent position in bed.

On *June 13th*, about 2 A.M., I was again sent for. I found the patient sitting up in bed. She was very nervous. Bleeding recommenced with much severity about half an hour before. Fully twenty napkins were used; half of the number perfectly soaked. The vagina was cleared of all clots; two fingers introduced *in utero*, and some clots, half the size of a hen's egg, removed. The uterus was not nearly so large as on the former occasion. I learned she had only taken her mixture for 48 hours. She had been wholly in bed, but had been "obliged to sit up frequently to attend to baby, as she was fretful." A full dose of ergot was given, and the former mixture ordered to be taken every 4 hours; also whisky frequently.

June 14th.—Clots passed in early morning; discharge very moderate. As her strength was seriously impaired, she was advised to wean her baby.

June 15th and *16th.*—Colour of discharge brownish; only one napkin in the 24 hours.

17th.—Lochia brighter; two napkins through day.

19th.—Colour almost gone; one napkin in 24 hours.

22nd.—Small quantity of "slimy discharge."

24th.—Feeling well; rose; no discharge.

25th.—Very slight discharge.

26th.—Rose about noon; up 2 hours; bleeding began, necessitating two or three napkins. Went to bed, but bleeding continued profusely; after a time it gradually ceased; there was then "a very free clear watery discharge. About 8 P.M. a large blood clot was passed." I visited about 10 P.M.; by this time the bleeding had almost stopped.

P. V. examination.—After removal of some clots, a pyramidal fixed mass fully occupied the cervix; the uterine tissue was soft, and it was possible to introduce two fingers within the os. The surface of the mass felt rough. The uterus could not be felt distinctly in the hypogastrium. In consequence of the feeble state of the patient, a prolonged examination was deemed inadvisable. The vagina was plugged; full doses of ergot and witchhazel ordered. The handling of the tumour caused little pain; patient stated she "had severe pain in the belly to-day, before and after the bleeding."

27th.—Feeling pretty well. To ascertain the exact nature of the tumour, a sound was used; it passed 2½ inches within the uterus. The diagnosis being clear, the tumour was fixed by forceps, and twisted off with little difficulty. The growth was, roughly, the size of a hen's egg, and was encapsuled in a distinct membrane.

July 2nd.—Patient exceedingly agitated, on account of a drunken row in lodging-house, but no recurrence of hæmorrhage.

The subsequent history contains nothing of note; in fact, from the removal of the tumour she progressed most satisfactorily. On 13th July she was able to take a longish walk.

REMARKS.—The whole subject, and especially the pathology of fibrinous uterine tumours, requires so much consideration that I sent the tumour for minute examination to Dr Woodhead, who, after careful observation, reported as follows:—"The tumour appears to consist of two factors: a piece of placenta, and large masses of coagulated blood. Near the surface of the tumour is an appearance somewhat like that very roughly washed in on the other side, the pink being the placental structure in which are a number of connective tissue, and, it appears to me, muscular fibres. The villi are covered with a layer of flattened epithelium, and are cut in various directions. In some parts of the section there are numerous cells, apparently from the wall of the uterus, which are undergoing the coagulation necrosis, *i.e.*, are with the fibrin forming a coarse network—the coarse strands being formed by fibrin and the periphery of the cell, whilst in the centre of the mesh is frequently seen the nucleus with a small quantity of granular protoplasm. This cannot be accidental, as it occurs at several points, and in every specimen I have examined. It is very like the network formed in diphtheria. The remainder of the tumour consists simply of coagulated blood which has been thrown out at different times, for in some cases the coagula are much more distinctly seen than in others. Delicate bands of fibrin, forming a network more or less dense and perfect, in which lie the coloured and a few colourless blood corpuscles." Dr Woodhead, who was most kind in thoroughly examining the tumour, wrote me further that he considered the cells to be "epithelial, not muscular in character—those lining the uterus and probably some of the glands." I was most anxious to have the opinion of an expert microscopist, as I have found very great confusion in literature regarding the variety to which some of these tumours should be referred.

On macroscopical examination the tumour, which was fully as large as a hen's egg, appeared to me more like a small fibro-cystic growth than a fibrinous polyp. I noted that what seemed to have been a cyst was for the most part occupied by a reddish bloody stratum, this stratum evidently having been formed from extravasation of blood within the cyst; the membrane forming the cyst wall was well developed. There had evidently been discharge of part of the contents of the cyst, as the dense coagulated blood and fibrinous appearance, together constituting the main part of the tumour, did not wholly occupy the investing membrane.

My rough microscopical examination, before proper hardening, showed bands of tissue somewhat like fibro-muscular structure, but this has been more exactly described in Dr Woodhead's report.

Having determined the morbid anatomy of the growth, its pathogenesis next demands notice. The most natural theory is that a growth, showing evidences of placental structure, is more or less a product of the placenta. It is well known that polypoid formations are a frequent result of one or more pieces of placenta having been left *in utero*. It is also equally well known that, at times, portions of retained placentæ may sustain existence for a considerable time, not only existing *in utero*, but, so to speak, persisting in vitality; for example, in one case, a lady was sent to the seaside for the recovery of her health and the stoppage of hæmorrhage, some weeks after abortion. A more severe attack of bleeding led to an examination, when a piece of placenta, fully the size of a walnut, was found lightly held in the cervix; on its removal, bleeding ceased.

But in the above case we have more than simple placental structure, a distinct evidence of cell formation, which cells were evidently derived from the uterus, and also some muscular fibres. The presence of smooth muscular fibres in the placenta has been described by Ecker and Kamenew, but denied by subsequent inquirers. Stricker states that his own researches demonstrate their presence to be constant in the external layer of the placenta uterina. I think it probable that the muscular fibres, here described, were uterine. In addition to the placental, there was the afore-mentioned hæmorrhagic portion encapsuled in a distinct membrane.

We may assume that the interpretation of the "coagulation necrosis," which Dr Woodhead remarks on as notable, is, that post-partum the vitality of the growth was checked, and that nature was preparing for its expulsion.

So that we may premise that the tumour had an ante-partum existence, distinct from the fœtal placenta.

"Small fibrinous coagula intimately blended with the projecting thrombi at the placental insertion are quite commonly found in the bodies of puerperal women. But larger coagula also, the result of repeated hæmorrhages, the size of a walnut, either of a round shape or flat, and lobulated, which may also project into the uterine cavity like a cock's comb, are by no means rare. These cases only are very rare where large fibrinous coagula, of a polypoid shape, are seated at the normal placental insertion, and project with their obtuse end into the cervix or vagina. A fibrinous polypus of that kind—the 'free polypus hæmatoma of the uterus' (Virchow)—consists of coagulated fibrin, including a nucleus of coagulated blood."

"Polypoid formations, from retained placenta, may undergo further modifications. Upon the pieces of placenta blood may be deposited in the way just mentioned, and a fibrinous polypus is formed with a pedicle of placental tissue, or the retained cotyledon may become bloodless, firm, and hard, and assume a shade corresponding to the uterine cavity. This forms the so-called placental polypus."

A few words regarding the changes in effused blood. It may remain liquid for some time, or quickly coagulate. Formation of cysts may take place, not so much in the effused blood as in the surrounding parts. "Those which are at first ragged and torn undergo more or less of inflammation, which ends in the formation of a solidifying blastema; this fibrillates, and passes into the state of more or less perfect fibrous or areolar tissue, and thus forms a capsule or cyst enclosing the now more or less altered blood." Rokitansky describes the later appearance of the lining as like a delicate serous membrane.

"*Hæmatoma.*—The effused blood may undergo a different kind of change, in consequence of absorption of its watery parts, and become in this way a kind of tumour, termed an hæmatoma, classed with new growths; but there is no doubt that it is a simple result of hæmorrhage, and this for three reasons:—(1.) That it presents no higher structure than that of fibrin; (2.) That it is generally devoid of vessels; (3.) That it does not appear to increase by growth in the proper sense of the term. The inner parts ultimately undergo some form of degeneration, while the others form a fibrous investment. An hæmatoma thus formed (*i.e.*, in the substance of new tissues, etc.) being essentially a fibrinous mass, may undergo certain other changes"—cretification; melanic pigmentation; perhaps ossification (Jones and Sieveking).

Some consider it doubtful whether such changes as bone formation can take place from blood effusion. Without expressing an opinion on this point, I conceive it might be well to retain the name "hæmatoma" to bloody tumours in loose tissues, *e.g.*, the vagina, vulva, or scalp. As a mere question of pathology the so-called polypoid uterine hæmatoma is diverse from the condition found as a result of rupture of vessels, and effusion into submucous connective tissues as found in the one, and beneath the aponeurotic or peri-cranial layers in the other.

No authority, so far as I know, has, however, observed distinct characteristic cell formation, similar to the above described appearances, in a simple hæmatoma. That the tumour was in great measure of this nature is true, but I think it would be erroneous to regard it as simply an hæmatoma. And while it is plain that the growth was partly placental, it seems to me equally evident that its development was inconsistent with the theory that it was derived from a portion of the main placenta. I think, if we believe in its formation from a placenta succenturiata, which some considerable time before labour had become wholly uterine in its connexion, and at one time or other had undergone certain structural changes already referred to, we may best realize the genesis of the polyp.

Twenty years ago, Professor Hodge of Pennsylvania, in his *Principles and Practice of Obstetrics*, fully described the nature of placenta succenturiata. Dr Eastlake has also (*Obstet. Transact.*, Lond.) written regarding this anomaly. Schrœder writes, "Sometimes the placenta is divided even in simple pregnancy. Two or more, even seven, placentæ, have been observed; and at the side of a larger, several placentæ succenturiata occur. These formations can easily be explained from the development of the membranes. Some of the villi of the chorion not inserted at the place of the decidua serotina retain their vessels, and enter into vascular communication with the decidua vera. If this does not take place the enlarged villi form the so-called placenta spuria."

Points of Pathology are here also of interest. Unlike certain allied tumours, no special bloodvessels supplied it. This was unnecessary, as the growth had been at first in the same relation to the uterine circulation as the placenta normally is, but afterwards received a more direct blood supply from a uterine vessel or vessels. In connexion with this, the grave bleedings which occurred when the tumour became partially detached can be understood more clearly.

Generally the formation resembled that of an aneurismal clot, in which laminæ are formed by the variations in the rate of the coagulation or succession of coagulations, and on the paler portions the definite formation of fibrin gave rise to similar microscopical characters. But the existence of an internal cyst containing clear fluid requires notice. We know, that in not a few cases, cysts of various size are formed on the concave side of the placenta; the connective tissues between the chorion and amnion are raised cyst-like, and are lined by flat epithelium; whilst the placental portion assumes a rough, shaggy appearance, and is covered by fibrinous deposits. These cysts are thin, transparent vesicles, containing a yellow or reddish-opaque thin fluid. It is supposed that they are formed from apoplectic centres. One writer, describing the "fleshy" species of polypi, says, "They sometimes contain a cavity filled with fluid resembling mucus or lymph. This variety is, however, a most likely one to be absorbed during pregnancy." Paget's description of the formation of cysts in loose textured fibrous tumours is also apposite—"They may be due to a local softening and liquefaction of part of the tumour, with effusion of fluid, or an accumulation of fluid, in the interspaces of the intersecting bands, but in other cases it is more than probable that their production depends on a process of cyst formation." Returning to the present case, it is probable the cyst was adventitious—that is, the walls were formed by the condensation of the connective tissue of the part; it is also likely that the cystic fluid may have been serous, derived from the effused blood. If so, the external investing membrane must have been, as we would expect, of earlier formation than the small internal cyst. The minute examination of the tumour shows that the different "probable sources" for the formation of uterine polypi, viz., the connective tissue of the uterus, placental growths, and blood-coagula, were all involved. And, as is remarked above, as a consequence of pathological changes in loosely bound together fibro-muscular (?) tissue, a cyst may be formed.

In further illustration of the benefit of sometimes "thinking twice before you speak once," or, in other words, making out the morbid anatomy ere you settle your ideas of a case, I may mention, that various considerations caused me to regard the polyp as of post-partum formation on the one hand, and as possibly an ante-partum fibro-cystic growth on the other. The theory of post-partum development was suggested by the clinical facts that the placenta was removed with the greatest ease, and seemed perfectly entire—there was neither uterine flaccidity nor hæmorrhage post-partum; it seemed probable, if the tumour had existed in a condition of latency, it would either have been expelled with the secundines, or have given rise to smart bleeding. On the contrary, the uterus contracted well, and no symptoms of a growth were then noted. The puerperium was normal; involution seemed natural, the patient having "slimy discharges" for four days antecedent to the first-mentioned bleeding. The post-partum formation of the body from a retained blood-clot seemed borne out by the symptoms. As has been already mentioned, polypoid growths are not infrequently observed when parts of the placenta are left behind. Schrœder perspicuously points out the time at which hæmorrhage is likely to occur, "It may be early, sometimes not till after the first week, more often after the second or third." But the placenta appeared to be wholly removed. I have paid some attention to secondary hæmorrhages, and judged the first bleeding to be due to the cause I have described as "imperfect thrombosis."[1] The patient had unduly exerted herself on the eleventh day after delivery, involution having seemed normal previously; it was believed that, as a consequence of the exertion, one of the imperfectly thrombosed veins became partially open. And we might with fair grounds assume the formation of an hæmatoma as a result; theoretically, this having a well-established uterine connexion, might become encapsuled in a layer of fibrinous connective tissue. It is evident that some thrombotic dislodgement actually did occur, as shown by the enormous bleeding. The remedies employed favoured vascular contraction; yet on the fifteenth day hæmorrhage recurred; it was considered probable that the thrombus then became freed, and the separated polypus developed. From this time to the 28th day the blood-oozing was like that of subinvolution, or like surface bleeding of a polyp. The first and only needful argument against this theory is the morbid anatomy; further, in accepting it, it would be necessary to believe that a polyp with such anatomy could be formed from blood-clot in thirteen days!

The other theory, viz., sub-mucous fibroid or fibro-cystic, was based on the grounds that while fibrinous polyps are rare, and if present during pregnancy, likely to cause abortion or become absorbed, yet the existence of such has been recorded. Cystic growths are mostly cervical and developed from the Nabothian glands or utricular follicles. But these follicles also exist near the openings of the Fallopian tubes, in the fundus, and upper part of the body, and granting an abnormal condition of the mucous lining, and a soft dilatable condition of the uterine walls, as was highly probable from the personal history of the patient, it was not impossible to conceive the tumour's formation in one or other of these ways. The examination of the growth put both theories quite out of court.

The polypus was ante-partum, but the post-partum influences, and the enlargement it received from secondary hæmorrhage, demand attention. I do not think, unless there had been undue exertion, that the hæmorrhage would have been so serious; in saying so I would point out the existence of the dual causes of bleeding, secondary hæmorrhage from the site of the polypus, and also from the imperfect thrombosis of an adjacent vein. To recapitulate, bleeding occurred on the 15th day, I conceive *not* from the vessel which was covered by the tumour, or at any rate from it only partly, mostly from a neighbouring vein. On the 28th day, when the polypus became loosened, blood gushed from the vein it had previously pressed on, and, by covering, plugged; thus bleeding was most profuse. The expulsion of the tumour from the uterine cavity was preceded by the discharge of clear watery fluid. After the partial detachment of the growth from the body of the uterus a large recent blood-clot was expelled; this probably was the result of bleeding from the site of polypoid insertion. A practical point is, that a firm blood-clot acts as an intra-uterine irritant, assists in the production of contractions, and hence aids involution. An ordinary experience in cases of miscarriage of twins at separated periods is the formation of such a clot. After one fœtus has been parted with it is not impossible that the other may reach full term. But this is very unusual; irregular involution or partial uterine atrophy takes place; thrombi are separated from certain veins; large bleedings occur. If appropriate treatment is employed a clot may form and bleeding cease; the uterus enlarges perceptibly thereafter; the same process of hæmorrhage, decrease in size, clot-formation and increase, may be repeated again and again, until the second fœtus is naturally or artificially dislodged. In the case under notice the large blood-clot was probably formed on 26th June. It is to be observed that after the escape of this clot, and the descent of the tumour within the cervix, bleeding ceased externally; the cervix was plugged by the polyp; nor was there evident internal hæmorrhage, neither collapse nor increased size of the uterus being experienced.

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[1] *Obstetrical Journal*, No. xlvii., Feb. 1877.

We must recollect that the personal and parturient history of the patient favoured uterine weakness; she was a very pale, fragile, anæmic little woman, frequently insufficiently nourished; she had barely sixteen months between her confinements, had nursed her first child fully nine months, so that she continued to nurse two months after she became pregnant. Altogether apart from the polyp, she was a most likely subject for secondary hæmorrhage or subinvolution. With the history given, we may readily suppose how easy it was, with an original abnormality, for the tumour to develop.

The differential diagnosis is very interesting, as, if my view is correct, we have here a combination of subinvolution, secondary hæmorrhage from irregular or imperfect thrombosis, and a polypoid tumour of placental origin. The early diagnosis pointed to secondary hæmorrhage, as the early puerperium was one of evidently good involution; the lochia lost colour on the 4th day, she was permitted to rise on the 9th day, and it was only after unusual exertion on the 11th day that bleeding began. Yet despite the foregoing observations, there must have been subinvolution, as it was possible to introduce two fingers within the os on the 11th day, the bleeding could not have caused such relaxation, had involution been normal the os would have been almost closed; my experience agrees with authority, that the os is normally closed on the 12th day. The uterus, prior to the removal of clots, was as large as a fœtal head. Now, it seems likely that the faint was most important in arresting the hæmorrhage, not the occlusion of the os by a clot, so that we may believe that this bleeding was extremely rapid as well as severe. Several cloths were used on the following day, but only two or three on 11th June; next day there was no discharge. On the evening of

13th bleeding was profuse; the os was still patulous, but the uterus much less in size. The probable cause of this attack was, she had been sitting up in bed, and had neglected her medicine. The subsequent account of slight flow on 15th and 16th June, a little more on 17th, and its gradual disappearance afterwards, indicated involution. The bleeding, which was so alarmingly profuse on the 26th, was clearly due to the new source of danger, the partially loosened growth. On this occasion the uterus was not felt in the hypogastrium, except by bimanual examination.

Such irregular bleedings are met with in chronic inversion, but in acute post-partum inversion the history is different; this condition supervenes suddenly, and with it we have hæmorrhage and collapse; partial inversion might occasion similar bleedings, but the organic condition would be explanatory. When the polypus was forced into the cervix it had much the feel of an inverted uterus: I was strongly reminded of one case I saw some years ago, with Dr Mellis of Fraserburgh and the late Dr Fiddes of Aberdeen, of chronic partial inversion; in many respects there was much similitude. The pain in handling an inverted uterus is much more marked; the roughness, said to pertain to inversion as distinct from polypus, was in the foregoing case of little help; the tumour by no means felt smooth; but the encircling band of uterine tissue was more symmetrically circular, and the relations of the vaginal parietes to the cervix more perfectly defined. However, it was not until I had cautiously passed a sound 2½ inches within the uterus that I felt justified in removal of the tumour. It is all very well to write in one's study of the "clear differences," but in this case, at least, there was nothing to prove that the body was *not* an inversion, which had been gradually formed and was eventually protruded, until the sound was used.

From prolapsus the tumour was distinct; it occupied the neck, and the neck could be felt. With prolapsus there can be little risk of confusion, even although there should be an opening in the polyp, unless the latter occupies the vagina very fully. I am aware of the possibility of complications of polypus with prolapse and inversion; but there seems here no need of further reference. Nor do I think the "book" differences of polypus from vaginal hernias, cystoceles, or malignant affections require discussion. In chronic cases it is doubtless valuable to bear these in mind, but not with a narration like the above.

The intra-uterine situation of the growth obscured diagnosis. Montgomery fully thirty years ago wrote, "Fibrous tumours formed in the substance of the uterus may thence descend, pass through the os, and form an ordinary pediculated polypus in the vagina." To him also we owe the fact that "a large polypus may make its first appearance immediately after delivery." Even with the additional facilities for diagnosis and knowledge we now possess, I think most will agree that until interference is clearly indicated, the policy of non-intervention is wisest. I fancy few would care to dilate and explore a recently parturient uterus, which had ceased bleeding, and judging from the discharges was undergoing involution. Had the polyp not appeared when it did, I would then have explored the uterus more thoroughly. I well know that in all obscure cases of uterine hæmorrhage an exhaustive examination is a hundred-fold less dangerous than is popularly believed. I have known cases where the impregnated uterus submitted to every abuse with impunity, even to an insertion of 10 grs. of lunar caustic to stop a supposed inflammatory condition, and, when profuse bleeding still continued, the artificial dilatation of the os revealed the true cause, a retained fœtus and an inflamed chronically enlarged uterus! Viewing our present case retrospectively, one might think, had the os been dilated, the whole thing would have been cleared up much sooner; yet although with the authority of Matthews Duncan to justify us introducing a carbolized exploring hand within the uterus shortly after delivery, and with my personal experience of the benefit of the practice, I would not consider a case of secondary hæmorrhage, with os contracted down to two fingers' breadth, a suitable one for this measure, until all others had failed; and that the case diagnostically seemed so far one of this description must be patent. Cervical tears, which have recently[1] been a subject of discussion, as regards their frequency and treatment, between Montrose Pallen and Henry Bennet, might have been included in differential diagnosis. These are seldom a consequence of natural labour in such subjects as my patient, and as a matter of fact there were none. Bleeding from varicose veins in the cervico-vaginal region is either tolerably easily discovered, or so slight as to require little attention. It seems impossible to misjudge either of these conditions so greatly as to confound them with secondary hæmorrhage proceeding from the interior of the uterus.

Treatment has in part been touched on. The primary indications were to check the flow and keep the patient living; the details have been described. Exactly the same treatment is required for secondary hæmorrhage and an intra-uterine growth, up to a certain point. As Churchill said, by these means some good may be done, just sufficient, perhaps, to enable the patient to wait for the descent of the polypus, with rather less risk than if nothing had been done. He, however, regarded ergot as a beneficial remedy of a special nature. I think the witchhazel tincture, ordered with ergot, a most useful addition. I have had much satisfaction with this drug in all classes of uterine hæmorrhage; even in malignant disease, it is fully equal, if not superior, to any remedy in restraining bleeding. A combination of hamamelis, with ergot and strychnia, and ferruginous tonics, combined with quinine, is all in the way of medicinal agents likely to be of use.

[1] *Brit. Med. Journ.*, Oct. and Nov. 1881.

The long subject of removal of polypi by means of the various media employed—galvano-cauteries, ecraseurs, ligatures, cannula, polyptomes, screws, scissors, or bistouries—need not now occupy us. It was found practicable to twist the tumour off after fixing it firmly; torsion, the simplest method of all, was found easy and satisfactory. There was no bleeding, and the operation was almost painless. The subsequent treatment was simply good nourishment, tonics, and rest. So well did these fulfil their aim, that on 13th July the patient was able to take a longish walk without fatigue.

Part Second.

REVIEWS.

On the Formation of Uric Acid in Animals: its Relation to Gout and Gravel. By P. W. LATHAM, M.A., M.D., Downing Professor of Medicine, Cambridge. Cambridge: Deighton, Bell, & Co.: 1884.

AMONG those who are at present devoting attention to the chemistry of the tissues, Dr Latham has deservedly gained a high place, and this study of uric acid formation will add much to the reputation which he has already won. It is a thoughtful and philosophical application of physiological chemistry to the explanation of clinical facts, and is equally interesting and instructive.

The author begins by stating that he believes the current belief as to uric acid being due to incomplete oxidation to be only partially true, and that he is inclined to hold that in man uric acid is partly caused by defective metabolism, and that it is in part a condensation product.

Chemically, the current view is supported by the fact that the oxidation of uric acid produces urea along with certain other substances; physiologically, it is supported also by the consideration that certain reptiles which have a low temperature and languid respiration excrete nitrogen in the form of uric acid. This fact, however, is shown to have little bearing on the matter; for in birds with a high temperature and rapid respiration the urinary excretion consists mostly of uric acid.

Diet may be thought to have an influence; but the diet which produces urea in one class of animals produces uric acid in another. It must not be forgotten, however, that the uric acid excreted by the *same* animal may be (and undoubtedly is) largely influenced by change of diet.

In the herbivora the place of uric acid is taken by hippuric acid, and this acid is decomposed by boiling with strong hydrochloric acid, the result being benzoic acid and glycocine. The reaction may be reversed: by heating glycocine and benzoic acid in a closed tube hippuric acid is produced.

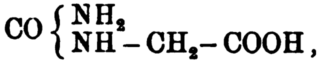
If benzoic acid is introduced into the alimentary canal, it is excreted as hippuric acid, having combined somewhere with glycocine. This change of necessity takes place at a temperature of 37°–38° C., whereas it requires a temperature of 160° C. when the reaction takes place in the laboratory.

Glycocholic acid (from biliary secretion), when boiled with an alkali, is split up into cholic acid and glycocine. This same change occurs in digestion, and the glycocine after reabsorption becomes urea, and is excreted by the kidneys. Part of the glycocine, however, enters into the composition of uric acid, and is eliminated as such.

If uric acid is heated with a solution of hydriodic acid glycocine is formed, and we should expect that the reverse of the process might be carried out. Hydantoic acid heated with hydriodic acid also gives glycocine; and hydantoic acid as well as hydantoin, allantoin, and glycoluril may be obtained from uric acid.

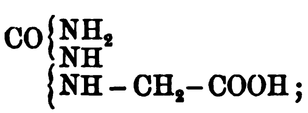
Hydantoic acid can be built up synthetically by heating urea and glycocine, as well as by heating glycocine sulphate with potassium cyanate; and from a consideration of these facts, Dr Latham has attempted to form uric acid synthetically, but hitherto without success. In his work, however, he states that Horbaczewski has, by heating glycocine with ten times its weight of urea, obtained uric acid synthetically. This experiment he has tried, carefully following out all the steps taken by Horbaczewski; but he has never obtained uric acid. The author is of opinion that the desired result can only be reached by passing through several stages.

The second part of the work is devoted to an application of the theory of uric acid formation to practical medicine. The glycocine and taurine which are in combination with cholic acid, after having performed their duty in digestion, are reabsorbed, and along with the other amido-bodies (such as leucin and tyrosin) are excreted by the kidneys as urea, the formation of urea being one of the metabolic processes occurring in the hepatic cells. If this process is interrupted (analogous to what occurs in diabetes), the glycocine and urea, or its immediate antecedent, would form either hydantoic acid—



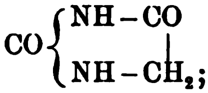
$$\mathrm{CO}\begin{cases}\mathrm{NH_2}\\ \mathrm{NH-CH_2-COOH},\end{cases}$$

or an acid having the formula—



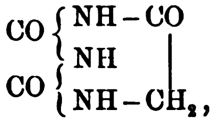
$$\mathrm{CO}\left\{\begin{array}{l}\mathrm{NH_2}\\ \mathrm{NH}\\ \left\{\mathrm{NH-CH_2-COOH};\right.\end{array}\right.$$

and these acids, when dehydrated, would give hydantoin—



$$\mathrm{CO}\left\{\begin{array}{l}\mathrm{NH-CO}\\ \qquad\quad |\\ \mathrm{NH-CH_2}\end{array}\right.;$$

or the following body—



$$\begin{array}{l}\mathrm{CO}\left\{\begin{array}{l}\mathrm{NH-CO}\\ \mathrm{NH}\end{array}\right.\\ \mathrm{CO}\left\{\begin{array}{l}\\ \mathrm{NH-CH_2}\end{array}\right.\end{array},$$

which is probably soluble in water, like hydantoic acid, hydantoin, biuret, and glycocine, or at least soluble in an alkaline fluid, such as the blood, like its isomeride uramil.

Hydantoin would in the kidneys unite with biuret to form urate of ammonium; but this reaction is less likely than the union of the hypothetical body whose formula is given above with urea to form urate of ammonium. The author believes this theory to meet all difficulties raised by former views on the formation of uric acid.

Just as diabetes is caused by an inability to effect the metabolism of glucose, so in gout and its congeners the imperfect metabolism of glycocine is the primary defect, and Dr Latham thinks that this depends on some nervous change which he would localize in the medulla oblongata, or the spinal cord, or both. The combined result is that there is a formation of ammonium urate. So long as the kidneys are sound the uric acid can be excreted; but if they are weak or diseased, part of the ammonium urate flows over into the general circulation, and is changed into sodium urate, which is deposited around joints whose nutrition has been impaired by the nervous affection.

The third part of the work is devoted to treatment, and the author begins it by considering the conditions which promote and hinder the transformation of glycocine into urea and uric acid. He shows that exercise either prevents the formation of glycocine or promotes its metabolism into urea, and that it is therefore highly useful. The diet he recommends to be mainly farinaceous, with just enough of nitrogenous food to satisfy the wants of the system. If glycocine has been formed, it may be got rid of by purgatives, or by the use of remedies which combine with it, and so prevent uric acid formation. Among such remedies the author recommends benzoic acid and the benzoates, salicylic acid and the salicylates, iodide of potassium, chloride of ammonium, and nervine tonics.

We offer no apology for giving such a complete sketch of the contents of this work. It is one of the most philosophical contributions made to medicine in recent times; and we are confident that it will be read with equal profit and pleasure by the physician.

Étude sur l'Albuminurie Alimentaire. By STANLEY M. RENDALL, M.D. Paris, M.B. Edin., M.R.C.S. Eng. Aix-les-Bains, Savoy. Paris: A. Parent: 1883.

THIS work, dealing with one of the most interesting problems which occupy the attention of the physician, is well worthy of perusal. It opens with an excellent historical review of pathological theories, and then enters upon a discussion of the connexion between alimentation and albuminuria, in which are incorporated Moxon's cases of temporary albuminuria, as well as some observed by the author. An analysis of the symptoms of albuminuria *post cibum* follows, to which succeeds a careful criticism of the whole question.

We cannot do better than give the author's conclusions.

1. There is in such cases as are described a true hæmatogenous albuminuria, in the sense that it is produced by an alteration of the blood plasma; not by any change in the kidneys, or their blood pressure.
2. The alteration in the plasma is intermittent, and may be attributed to the introduction of an imperfect form of albumen into the blood current.
3. The imperfect form of albumen is the result of some disorder in digestion or assimilation, for the albuminuria is only found after the injection of foods, but the nature of the disorder is as yet doubtful.
4. The intermittent digestive albuminuria is not associated with any renal disease or change, but an important question is to discover if the condition may lead to an ultimate change of structure if it be not checked by appropriate treatment.
5. The prognosis is favourable in such cases, if they are not neglected, but receive appropriate treatment.
6. The treatment should consist in the administration of drugs which augment organic combustion, in change of air, regulated diet, and rest from all bodily or mental disturbance.

This study of digestive albuminuria is clearly the work of one who has thoroughly grasped his subject in every way, scientific as well as practical, and it forms a valuable addition to the literature of albuminuria.

Rupture of the Urinary Bladder. By WALTER RIVINGTON, F.R.C.S. Eng. London: J. &. A. Churchill: 1884.

THIS is an elaborate work of above 150 pages. It has been undertaken mainly to point out that urine is more irritating to the peritoneum than is generally believed, and that the proper treatment for rupture of the bladder is opening the abdomen, clearing out the peritoneal cavity, and establishing thorough drainage of the viscus by some efficient method. With all this we cannot disagree. But we cannot support Mr Rivington in his attempt to discredit all cases of recorded recovery after rupture of the bladder. His argument almost amounts to this,—that he will not believe in intraperitoneal rupture, unless the patient dies and the tear is discovered post-mortem, or the abdomen is opened during life, and the rupture seen.

For purposes of reference Mr Rivington's book is most valuable. He has collected together 322 reported cases, 40 of them being recoveries. As the causes of rupture he gives distention (as a rule), intoxication (alcohol acting by increasing the flow of urine, but mainly by deadening the sensibility of the bladder), and a blow, fall, or occasionally muscular contraction of the abdominal muscles. In explaining how the bladder usually ruptures posteriorly, Mr Rivington advances the opinion that it is due to *contre-coup*, the blow in front sending a wave backwards, which determines the rupture. We prefer to believe in the old theory of the jambing against the sacrum.

In Part II. there is a very graphic description of the symptoms of this injury, and reference made to points in diagnosis. The value of the catheter in diagnosis is dwelt upon. We think that the risk of septic infection by the catheter, causing putrefaction of the blood and urine, is not sufficiently pointed out. Mr Heath's proposal of injecting with warm water as a means of diagnosis he disapproves of.

Part III. deals with the reported cases of recovery; and again we say that we cannot approve of the wholesale way in which doubt is thrown on the statements of such men as Syme, Porter, Paget, and many others.

Part IV. refers to treatment. It is the shortest chapter in the book. Mr Rivington's recommendation may be put in one word —laparotomy. He also refers to a perineal opening for exploration and subsequent drainage. Mr Reginald Harrison's recent paper in the *Lancet* recommends treatment on the same lines, only he puts the perineal (lateral cystotomy) incision as first and most important. With this latter method we are more inclined to agree. In regard to the question of the sewing up of the rent in the bladder, Mr Rivington considers the procedure unnecessary, on account of the well-known property of the viscus of contracting and remaining contracted, provided there is efficient drainage of the urine.

Handbook of Geographical and Historical Pathology. By Dr AUGUST HIRSCH, Professor of Medicine in the University of BERLIN. Vol. I. *Acute Infective Diseases.* Translated from the 2nd German edition by CHARLES CREIGHTON, M.D. London: The New Sydenham Society: 1883.

THIS is another of the many useful and valuable works put in the hands of the members of the profession in this country by the New Sydenham Society.

Since Dr Creighton's address on pathology at the meeting of the British Medical Association in Liverpool, it has been anticipated with interest, and our anticipations have not been disappointed.

It would be presumption to attempt to criticise it, as will be evident when we give an idea of the purpose and scope of the work.

It consists of thirteen chapters, a chapter being devoted to each of the following diseases:—Influenza, dengue, sweating sickness and miliary fever, smallpox, measles, scarlet fever, malarial diseases, yellow fever, Asiatic cholera, plague, typhus, relapsing fever and bilious typhoid, and typhoid. The method of inquiry followed in each of these is much the same. The disease is traced historically from the earliest notices of it down to the present time; its present geographical distribution is then elaborately detailed. Its epidemics may be compared with those of somewhat analogous diseases, and the influence seasons and weather and soil have on them. Then the conditions associated with the type of the disease are considered, while the nature of the virus, the original habitat of the disease, and the mode of diffusion of the morbid poison, are all considered.

It is difficult to estimate accurately the amount of labour which such a book represents, but some idea of it may be formed when we state that there are nearly thirteen pages of closely printed references to the literature which has been consulted for the production of the chapter on influenza.

The work is a most important contribution to the department of science with which it deals, and brings interesting and valuable information within the reach of even the busy practitioner.

The author may well be congratulated upon this monument to his industry and ability, while Dr Creighton is to be complimented on the excellent manner in which he has performed a very laborious task.

A Text-Book of Pathological Anatomy and Pathogenesis. By ERNEST ZIEGLER. Translated by DONALD MACALISTER, M.A., M.B. Part II., Pathological Anatomy, Sections 1-8. London: Macmillan & Co.

IN the preface the translator explains his reasons for preferring to issue at once this, the first portion of the latter half of Professor Ziegler's work, and not waiting for the completion of the whole, at the same time mentioning the final part is in hand and will be ready ere long.

The volume under consideration deals with the pathology of the blood and lymph; the lymphatic glands and spleen; of serous and mucous membranes; of the skin, the intestinal tract, liver, and pancreas. That of the kidney, lungs, and the nervous system being reserved for the volume to follow.

The high standard attained by both author and translator in the former portion of the book is sustained in all respects in this; the language in which the writer's ideas is expressed is terse and to the point, the whole being easily read, and that with pleasure and profit. We but shortly draw attention to one or two points. In the chapter commencing the consideration of the serous membranes, we find the views of Professor Ziegler when discussing the development of serous cavities to differ much from what they were as originally expressed in the early German edition, being now founded upon the discoveries and facts published in the elaborate works of Hertwigs and Balfour. He points out how the primitive body cavity is originally a part of the primitive alimentary canal or archenteron, and not, as formerly thought, connected with the vascular system, and that the bloodvessels and lymphatics arise independently of the body cavity as excavations in the substance of the mesoblast. The cavity not being a mere lymph space, is clothed, not with an endothelium, but with an epithelium derived originally from the hypoblast; and under the layer of epithelium lies a layer of connective tissue with bloodvessels and lymphatics, which latter communicate freely with the body cavity by stomata, and is known as a serous membrane, and ultimately as peritoneum, pleura, pericardium, etc.

This naturally gives a peculiar histological importance to the subject, inasmuch as the morbid changes which occur in them are presumably related more to those of the mucous membranes than of the lymphatic system.

The pathology of skin diseases is not treated of from a purely ætiological point of view because of the endless variety of injurious agencies by which the cutaneous surface may be affected, and also because the same cause may bring about different affections in different persons and the converse, but the author prefers to classify them according to the histological changes which they involve as far as can be done, the clinical course being at the same time necessarily sometimes regarded.

The views expressed in the section devoted to croupous and diphtheritic inflammations are worthy of notice, and to some extent seem to explain the differences of opinion which now exist as to the identity of croup and diphtheria. We have it pointed out how in croupous inflammation it is the exudation which specially coagulates, while in diphtheritic there is necrosis and coagulation of the tissue below the exudation as its distinguishing feature. Two forms of diphtheria are described—a superficial and a deep—the former being the less severe and the one apt to be confounded with croup, and in which necrosis of the epithelial layer alone occurs. The latter affects a greater extent of tissue than the superficial, and is characterized by the coagulation, not merely of the epithelium, but also of the underlying connective and fibrous tissue, and due to an invasion of micrococci. Croupous inflammation occurs chiefly in the respiratory mucous membrane, rarely in the alimentary tract.

In conclusion, we may state that, as is to be expected, the portion of the work now before us is a valuable addition to the ever increasing and important subject of pathology, and should be carefully studied. The letterpress is freely interspersed with most excellent drawings of great value and artistic power.

The Descriptive and Surgical Anatomy of the Inguinal and Femoral Regions considered in Relation to Hernia. By EDWARD L'E. LEDWICH, Lecturer on Anatomy at the Ledwich School of Medicine, Dublin. Dublin: Fannin & Co: 1884.

WE have read through the whole of this work with the expectation of finding a *raison d'être* for its publication, either in a better description of the anatomy of these regions than that contained in the ordinary text-books of regional anatomy, or possibly in some original facts or theories on the subject. Our labour has been in vain. The work certainly does contain a careful and on the whole accurate account of the anatomy of the parts; but in many respects this might be improved. Thus there are no indications to the student of what he might learn by an examination of these regions in the living body or on the undissected subject. The description of the superficial fascia of the groin might be improved and simplified had the author followed the account given of it by Professor Struthers. A femoral hernia is said to "turn upwards over Poupart's ligament on to the inguinal region," but no attempt is made to explain the fact. In connexion with femoral hernia, nothing is said about the influence of the position of the thigh upon the tension of the fascia lata bounding the saphenous opening.

The work is illustrated by ten lithographic plates and a few woodcuts. The plates are drawings of dissections, but as such they are decidedly diagrammatic, and in several of them the relative size of the arteries is much exaggerated.

A Manual of Psychological Medicine and Allied Nervous Diseases; containing the Description, Etiology, Diagnosis, Pathology, and Treatment of Insanity, with especial Reference to the Clinical Features of Mental Diseases, and the Allied Neuroses, and its Medico-Legal Aspects, etc. Designed for the General Practitioner of Medicine by EDWARD C. MANN, M.D., Member of the New York Medico-Legal Society. London: J. & A. Churchill: 1883.

THIS is an octavo volume of above seven hundred pages. Nothing of importance is omitted, and the author shows a good acquaintance with the very latest literature of the subject. Dr Mann's mind is what may be called eclectic; he readily accepts new ideas, and is perhaps too fond of yielding to authority and too little apt to use his own judgment. Some few writers have a happy gift of, at least in appearance, making their own the experience of others, and if Dr Mann had been a little less honest, his book might have had an air of greater originality and decision of views. The number of quotations from other writers is great, and is made the more striking by their being generally put in smaller type. For example, from p. 556 to p. 608, the whole text consists of a series of extracts from different writers—Russell Reynolds, Rockwell, Buzzard, Anstie, Craddock, and Althaus—upon the treatment of diseases of the nervous system by electricity. In discussing the vexed question of treatment of the insane without mechanical restraint, Dr Maudsley appears as the advocate on the one side, and Dr Ray of Philadelphia on the other. As might be expected, the case is very well argued. Some of the quotations afford interesting reading. There is evidence throughout the book that the author has very carefully studied both nervous diseases and insanity, that he can think for himself and express his thoughts clearly, and especially in the matter of treatment he has often useful suggestions to make. The following seems worthy of attention:—"As I have found that strychnia was a physiological antagonist to alcohol, I have used it largely and successfully in the treatment of dipsomania. I give from $\frac{1}{30}$ to $\frac{1}{32}$ of a grain, thrice daily, in combination with quinia and tincture gentian comp., so that my patient takes one or two grains of quinine before each meal with the strychnia. This makes a pleasant bitter tonic, and one under which patients recuperate quickly." To show the comprehensive manner in which the subject is treated, it may be observed that there are chapters on the development of the nervous system by evolution, hysteria, vertigo, chorea, somnambulism, and cerebral and spinal anæmia, which are treated in an interesting and instructive manner.

The following quotation goes to support the views expressed in our own country by Dr Clouston:—"Physiology points to the necessity among our American women of a better developed physical system, more evenly balanced in all its parts or organs, for a greater harmony in the performance of all their functions, especially in reference to what may be termed the primary laws of nature, so that their children may not be weighed down in the struggle of life with a defective organization, but be blessed in the inheritance of a perfect anatomical and physiological structure in all its parts and organs, with a resulting harmony in the performance of all their functions, with perfect mental and physical health, and immunity from the host of nervous diseases that affect so large a proportion of our people. It may seem as if an undue amount of attention is spent in the consideration of this question, but having, by reason of my speciality, devoted much time to the study and investigation of hereditary disease, I am firmly impressed that in order to eradicate dipsomania and allied nervous diseases, and to check the increasing tendency to physical degeneracy among American people, we must aim at the extirpation of radical defects in physical organization. At present the average number of children to each American family is steadily decreasing with each generation, and the children that are born exhibit a want of vitality, a want of stamina in the constitution, and such a predominant tendency to physical degeneracy as threaten seriously, it seems to me, the perpetuity of our native stock."

In the appendix there is an abstract of the laws relating to the care and custody of the insane in the United States by William J. Mann of the New York bar. The medical practitioner who uses this work for consultation will probably find in it what he wants, but the book would be much improved by condensation and greater elaboration of thought.

A Few Words upon Anæsthetics. By R. T. FREEMAN, L.R.C.P., M.R.C.S. Eng. London: J. & A. Churchill: 1883.

MR FREEMAN begs us to accept this booklet as the pioneer to a more important work on hand. Why he should have thought it necessary to send forth so feeble a pioneer we cannot understand. With the exception of a description of an extremely complicated apparatus designed by the author for the purpose of administering anæsthetics, it contains nothing that is new or important. A catalogue of anæsthetic apparatus is a catalogue of very dangerous instruments, and not to be commended.

Where to take a Holiday—Reports on some Home and Foreign Health Resorts, being the Holiday Number of the London Medical Record. London: Smith, Elder, & Co.

The Sulphur Waters of Strathpeffer. By D. MANSON, M.A., M.D. Fifth Edition. London: J. & A. Churchill.

Scarborough as a Health Resort. By ALFRED HAVILAND, M.R.C.S.E. London: Hamilton, Adams, & Co.

Leamington: Past and Present. Leamington: D. Sarney.

Seize Années de Pratique Médicale à Contrexéville. Par le Dr DEBOUT D'ESTRÉES, Médecin inspecteur des Eaux de Contrexéville. Paris: Félix Alcan.

"WHERE SHALL WE GO?" is the query echoed at this season on every side by those who need rest or change, and to such weary ones there seems no lack of replies. The holiday number of the *London Medical Record* is an excellent compilation, containing original papers by Macpherson, Weber, Symes Thompson, Parsons, Burney Yeo, Thin, and Vintras, as well as useful notes on a large number of home and foreign health-resorts. It has proved of interest to us in every way, and the only point to which we would take exception is a mistake made by Inspector-General Macpherson. He states that the strongest waters of Harrogate are more powerful than those of Strathpeffer, whereas the latter are without question by far the most powerful in Britain.

Dr Manson's work requires no recommendation at our hands—its success speaks for its excellence. The guides to Scarborough and Leamington are very good; and M. D'Estrées' work on Contrexéville, as a cure for urinary diseases, is equally useful to the physician and the surgeon. The vast influence of fashion in determining the estimation in which health-resorts are held cannot fail to strike any one who glances over such books as these.

The Leamington Waters, Chemically, Therapeutically, and Clinically Considered; with Observations on the Climate of Leamington. By FRANCIS WILLIAM SMITH, M.D. London: H. K. Lewis: 1884.

IN this neat volume an account, which is fair without being overdrawn, is given of the Leamington waters, which are not at present taken advantage of by Britons to the extent they deserve to be. At Leamington there are the inducements which a pure water supply, a good system of drainage, and a charming neighbourhood hold out; while it is at least a question whether a course of the mildly saline springs there is not more permanently beneficial than that of the stronger waters of a similar class met with abroad. The change, as a mere change, may not be so complete, but the presence of home comforts and of national cookery would counterbalance, to the invalid who does not speak German, some possible attractions. The sufferer from chronic gout, or from a congested and sluggish liver, might do well to try a season at Leamington before resorting to Carlsbad or Marienbad.

Part Third.

MEETINGS OF SOCIETIES.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

SESSION LXIII.—MEETING VIII.

Wednesday, 4th June 1884.—Dr LITTLEJOHN, *President, in the Chair.*

I. ELECTION OF NEW MEMBER.

Frederick Anastasius Saunders, L.R.C.P. & S.E., Crail, was elected an ordinary member of the Society.

II. EXHIBITION OF PATHOLOGICAL SPECIMENS.

1. *Mr F. Caird* showed a KNEE JOINT in section, on which, about a year previously, Mr Chiene's operation for knock-knee had been performed. Amputation was necessitated on account of gelatinous degeneration. The preparation demonstrated that in the operation for knock-knee the joint had not been opened into, that perfect healing had resulted, and that the epiphyseal line occupied a normal plane.

2. *The President* showed (*a.*) THE PARTS FROM A CASE OF CUT-THROAT. It happened in the person of a constable who had been troubled for about six months with insomnia. One morning he got up about four after a restless night. His wife, who was sleeping in another apartment, heard a heavy fall and a deep moan, and going in found her husband lying on the floor and blood flowing from the neck. Strange to say he was able to articulate, and said he had cut his throat. His larynx was opened into, the epiglottis cut across. No important vessel was wounded, but there must have been considerable hæmorrhage. He was taken to the Infirmary, but died on the way. The body was taken home after two days, when the widow consented to have a post-mortem performed, the reason for this being that the man was insured, and he (Dr Littlejohn) was of opinion that if an autopsy revealed cerebral disease, the medical attendant was entitled to give such a certificate of death as would cause even those insurance companies who forfeited the policies of suicides to pay the policy. In this instance he was glad to say he found traces of chronic cerebral disease, great adhesions of dura mater to bone, adhesions in arachnoid cavity, a large amount of sub-arachnoid fluid, and roughness of the internal surface of the cranium, justifying him in giving a certificate of chronic cerebral disease with a wound in the neck, which was available in procuring the insurance money. (*b.*) THE LIVER AND HEART, from a case illustrating the effects of a fall from a height. A heavy woman, aged about 50, threw herself from a window in Allan's Close. The distance to the ground was measured and found to be 80 feet. She sustained injuries to her head, compound fracture of one of the thighs. The liver had sustained rupture. The appearance of the heart was interesting. The base, as not unfrequently happened, was ruptured, but in addition to that there were two very marked lesions, one in the right the other in the left ventricle. These were made out to be caused by two ribs which had been fractured and driven in upon the heart.

III. ORIGINAL COMMUNICATIONS.

1. *Dr James Carmichael* read a paper on the TONSILLAR AFFECTIONS OF CHILDREN, which appeared at page 33 of this Journal.

The President said they had listened with much pleasure to this exhaustive paper on those troublesome affections of children. He should like to ask Dr Carmichael whether he met with those conditions most frequently in his private practice or at his cliniques in the Sick Children's Hospital; whether he had noticed that they were more prevalent on certain days of the week, Dr Alison having remarked that sore throats in children were more frequent on Mondays and the beginning of the week than at any other time, and attributed this to the effects of the usual Saturday night house-washing; and lastly, whether they occurred more frequently in one locality than in another? Canal Street, which was now swept away by the City improvements, was at one time very much affected.

Dr Rattray of Portobello said he had seen a good many cases of scarlatinal and diphtheritic sore throats, and was much struck with the difficulty that sometimes occurred in the differential diagnosis. This was more apt to happen at the beginning of the affection, for he thought that later on there should not be much difficulty. As to liability of certain localities, in Pipe Street, Portobello, they had a great many throat affections not sufficiently pronounced to enable them to say what the nature of the disease might be. Mothers often brought children to them without knowing that the throat was affected. No. 5 High Street was another evil locality, which he would like very much to have condemned by Dr Littlejohn.

Professor Chiene said he should like Dr Carmichael's opinion on one point. He had listened with much pleasure to the paper, but regretted that no allusion had been made to the treatment of hypertrophied tonsils. Excision of these was, he thought, very much overdone; but he should like to ask Dr Carmichael what he thought on the matter.

Dr M'Bride said he had been struck by one or two points in Dr Carmichael's paper. The first of these was the differential diagnosis between croupous and diphtheritic inflammation. Was it possible to make a diagnosis in severe cases of croupous tonsillitis? He did not think it was always possible, because almost all the points of difference as laid down in the text-books failed. The second point was that Dr Carmichael had spoken of certain forms of non-symptomatic tonsillitis as infectious. This was a new fact to him. Catarrhal affections of the mouth and nose were undoubtedly infectious, but he had not previously heard of catarrhal tonsillitis being so. He wished to ask if Dr Carmichael found that such was the case in his own practice. Thirdly, as regards Dr Carmichael's view that croupous inflammation sometimes passed into diphtheritic. Was it not rather that a croupous inflammation left the tonsil in a weak state, and liable to take on diphtheritic action when exposed to infection? In the fourth place, and in reference to remarks previously made, were not hypertrophied tonsils much abused organs? In many cases the mucous membrane of the nose and the pharyngeal tonsil were enlarged and obstructed respiration, but given hypertrophied tonsils alone, were they of themselves sufficient to obstruct nasal respiration? He did not quite see how they could, unless enlarged so as to fill up the whole naso-pharyngeal space.

Mr A. G. Miller wished to join Mr Chiene in asking Dr Carmichael his opinion of excision for hypertrophied tonsils, and also his views as to the use of gargles in tonsillar affections. On the latter point, he himself was inclined to believe that gargles were singularly inefficacious. It did not appear that they reached the tonsils, and one seldom could get children to use them properly. As to excision, he thought with Mr Chiene that hypertrophied tonsils were too frequently meddled with. Some years ago, he was inclined to remove enlarged tonsils whenever he saw them, and once or twice in dealing with soft tonsils he was annoyed by the way in which the tonsils tore. He tried painting with some astringent, as tannic acid and glycerine, in order to harden the tonsils for removal, and found that this treatment was often sufficient without excision.

Dr James wished to refer to the backward pressure effect of enlarged tonsils on the chest, and the justifiability of their removal in certain cases. As to the bad effects, pigeon chest and so on, physiologically, it was easy to see how these would occur. They knew that, if they took the respiratory power in man, air passed in and out with, in inspiration, the slightest amount of negative pressure, and in expiration the slightest amount of positive pressure. They found, if they diminished in any way the size of the opening by which air passed into the chest, the fluctuations of the mercury in the manometer were greatly increased. When they remembered what that meant over the surface of the chest-wall, they could understand how the slight enlargement of the tonsils would produce this change in the growing chest-wall of the child. They should remember that very slight obstruction was sufficient to cause chest deformity. He had seen pigeon-breast brought on by enlarged tonsils, and disappear when the tonsils were removed. He had seen a similar effect produced by a nasal polypus, and also disappear after its removal. It must be remembered, as Dr Carmichael had pointed out, that hypertrophy of the tonsil was frequently associated with a small contracted condition of the nostrils. People with enlarged tonsils had always to breathe through the mouth. He, therefore, was in favour of operating on the tonsils where there was any chance of deformity of the chest occurring.

Dr Allan Jamieson had been, like previous speakers, very much interested in Dr Carmichael's paper. He wished, however, that a little more had been said about the etiology of these tonsillar affections in children. In one point he was interested, the association of scarlet fever with diphtheria. It was evident, as Dr

Carmichael had brought out, that the diphtheria did not arise out of the scarlet fever, but that the diphtheria was superadded to it. Some years ago he had attended a family with scarlet fever in a large house well drained. Each of the children after recovery developed diphtheria. When they inquired into the cause, they found that the drainage was conducted into a cesspool some distance down the hill from the house, which had not been cleaned out for a very long time, and the gases having ascended to the house, found the throats of the children in a weak condition, and produced the diphtheria. They all recovered. Another cause of tonsillitis seemed to him to be that in Edinburgh it was a custom for people going away for a time to shut up the house. The water, even in the best trap, was apt to dry up when the drains were left unused, and deleterious gases were apt to get into a well-drained house and contaminate the house and cistern, and so lead to diphtheria. In one instance a servant was sent home to clean the house before the return of the family. She got a sore throat, but said nothing about it. One child after another on going home took sore throat, it being infectious. It was not till the third or fourth child had it that she thought of telling, and so cleared up the mystery. Dr M'Bride had spoken of the occurrence of diphtheria upon tonsils due to the lowered conditions of the tonsils. He saw a curious instance of this a short time ago. A butler had a severe attack of diphtheria consequent on the defective drainage of his master's house. A year afterwards, when the family were away from home, one of the servants went to the Infirmary for advice regarding her tonsils, which were enlarged. She was advised to have them removed. At the time the tonsils were evidently in a soft state. When she returned home a diphtheritic deposit appeared on the cut surface of the tonsils. This lasted for a time with constitutional effects, albuminuria, etc., but the girl eventually got well.

Dr P. A. Young thought some of the points raised by Dr Carmichael of great practical importance, more particularly the differential diagnosis between croupous and diphtheritic inflammation. Almost one of the first cases he was called to after commencing practice was a case in which he had diagnosed croupous inflammation. It was attended with painful results, and made a great impression on him. He had been taught to believe that croupous inflammation was not infectious. He therefore took no precautions. A second member of the family took the affection and died with all the symptoms of diphtheria, though the first got well. He was sure that a bad case of croupous inflammation and diphtheria could not be differentiated. Croupous tonsillitis, he believed, was really a mild form of diphtheria. The cause of the affection might be helpful in enabling them to decide what to do. Was the cause a change in the temperature, or was it due to drainage? If the first, there was no necessity of making the patient's friends turn the house upside down. In the second case, the drains must, of course, be attended to. The real cause was not, however, always easily determined. He did not know whether Dr Carmichael had noticed that when diphtheria was epidemic tonsillar affections came on, and very often after an attack there was a relapse. As to the infectiousness of coryza, he had seen lately a case very illustrative of this. A gentleman suffering from thoracic aneurism was put to bed. They were very anxious to prevent him sneezing. His little boy having a nasal catarrh was ordered to be kept apart from him, but on two separate occasions he managed to get beside his father, and in both instances infected him badly, and greatly risked his life. There had been no change in the temperature to cause such a thing as a cold in the head.

Dr Gunning said his experience was that these tonsillar affections were usually got rid of and prevented by the use of hot-water gargles and the wearing of flannel. He had been very subject to sore throat himself, but since he began to wear high collars he had not suffered.

Dr Carmichael, in replying, remarked that his paper was not meant to be exhaustive, and he had purposely avoided entering upon the etiology and treatment of these diseases. In answer to the President's questions, he could not say whether he had observed a larger proportion of these cases in private practice or at the Sick Children's Hospital. He had first begun to study them carefully in the out-patient department of the hospital, but he could not say that the proportion was greater there than in private practice. He had not noticed that they occurred on different days; but they did seem to prevail in certain localities, more particularly in low-lying and damp situations. As to the excision of enlarged tonsils in young children, he did not recommend it, unless they were interfering very much with the child's general health. By the use of local and constitutional means it was wonderful how they improved as the growth and development of the child proceeded. In reply to Dr M'Bride, in regard to the differential diagnosis between croupand diphtheria, he would remind him that in his paper he had said that in some cases it was impossible to draw a distinct line between these diseases; but as a broad clinical fact, he agreed with Henoch, that if the exudation did not soon begin to clear off, and the case improve, it was probably diphtheritic. His experience was that simple catarrhal affections of the tonsil were under certain conditions (it might be atmospheric) infectious. He had also observed that tonsils already affected by catarrh were more liable to take on diphtheritic action when exposed to infection. This was especially the case in scarlatinal tonsillar catarrh. Gargles, he found, they could never get a child under ten to use, and he was not sure that they did much good. The best method of applying remedies was by painting or spraying, or by Kirby's glycochol lozenges, or by the insufflation of tannin or dried bicarbonate of soda.

2. *Dr John Duncan* read his paper on TRAUMATIC STRICTURE, which appeared at page 12 of this Journal.

Prof. Chiene rose to say how interested he had been in hearing a full account of this case, part of which Dr Duncan had related to him already. He thought the practice was one which might be adopted in similar cases. He thought that when one failed to pass the catheter, after having cut down on the stricture, he might be guided to the spot where the urethra was by causing the patient to micturate. In regard to the treatment of extravasation, he should like to know if Dr Duncan was still of opinion that it was best to incise the perineum. For his own part he preferred aspiration, because he did not think that extravasation should naturally lead to sloughing. In one instance where he failed to pass the catheter, extravasation having occurred, he aspirated the perineum three or four times, and was ultimately able to pass a catheter. It was putrid urine that caused sloughing, the urine becoming putrid from dirty instruments being passed. In two cases he had used aspiration with success. He had been taught that incisions were necessary, and had not dared to try aspiration before experimenting, by injecting urine into the cellular tissue of the rabbit, a tissue that was very prone to slough.

Mr Joseph Bell thought there could be no two opinions in the Society as to the excellence of Mr Duncan's paper. With regard to the question of the first treatment of a case where there was reason to believe traumatic rupture of the urethra had taken place, he still held to the opinions he had expressed in a paper read some little time ago to the Society. If the case was got in time before extravasation occurred, he believed that successive aspiration would cure the case. This was more particularly important in cases of fracture of the pelvis, because when an incision was made, the fracture became compound. As to the effect of urine on the cellular tissue, he had come to the same conclusion as Mr Chiene a great many years ago, but without experiment. He had operated on a child for a large stone, and had thoroughly lacerated the side of the prostate gland, and there was no doubt urine was effused over the tissues, and yet there was no trouble. While agreeing theoretically with Mr Chiene, it had not been his lot to see cases of extravasation go so kindly, probably from the catheters not being thoroughly antiseptic. In a case seen first by his house-surgeon, the catheter was passed with most elaborate antiseptic precautions, and though there was undoubted evidence that the urethra was ruptured, it reached the bladder at once. A tube running into a vessel half full of a carbolic solution was fixed to the catheter, but one day a clot having formed in the passage, the patient strained himself so hard as to drive out the catheter, and make water naturally. A perineal abscess followed, but this disappeared after incision, and he trusted that stricture would not result, bougies being passed very readily, and with great ease. With reference to

Mr Duncan's ingenious method of treatment in the case he detailed, Sedillot of Strasburg, he thought, had proposed a similar mode of treatment for such cases, but he was not aware that he had ever performed it.

Dr MacGillivray said he had seen the very operation described by Mr Duncan performed by M. Pean in St Louis Hospital in 1874. Perineal section was first performed, but the upper end of the urethra could not be made out. The bladder was then opened above the pubis, and an instrument passed from within outwards. He could not say what the result was.

Mr A. G. Miller wished to ask Mr Duncan if he considered that traumatic rupture of the urethra was always transverse, and if so, why? He did not think that in every instance rupture of the urethra caused by fall with the legs astride of anything was always transverse. Mr Chiene seemed to be of the opinion that sloughing after extravasation was due to only one cause, and that was sepsis. He thought it would be safer to say that the sloughing was due to inflammation, and the inflammation to the sepsis.

Dr John Duncan, in reply, said that there were various important points in connexion with traumatic stricture that were still undecided. One of these was the question of sloughing after extravasation of urine. He thought Mr Miller had put the case very well, when he said that it was due to inflammation, and the inflammation to sepsis. Sloughing did not always occur after extravasation, but it was never desirable that a man should pass water into his cellular tissue. Urine was very variable in its irritating qualities. It might lead to nothing or only slight inflammation, but it might also cause inflammation to such an extent as to be followed by abscess and sloughing. The question was, how were they to prevent a man passing water into his perineum? That was an important point. He agreed with most of the speakers that in a certain number of cases aspiration was sufficient. In other cases a free incision was, he thought, the best mode of treatment, more particularly as it was not improbable that attempts to pass the catheter would fail without assistance from a perineal action. He had no doubt that rupture of the urethra in the usual situation was always transverse. It was the jam between the outside force and the bone that caused the nip, and the bone lying transversely across the urethra must cut it transversely also. A sharp instrument cutting from the outside might make a longitudinal incision. He thought the supra-pubic operation on the bladder might be extended to many other conditions, as lithotomy. He had done it lately in preference to lateral lithotomy. It avoided the risks of hæmorrhage, and of injury to the prostate, and there was less depth of tissue to cut through. There was little fear of opening the peritoneum so long as the operator kept well behind the pubis.

OBSTETRICAL SOCIETY OF EDINBURGH.

SESSION XLV.—MEETING VII.

Wednesday, 11*th June* 1884.—Dr PETER YOUNG, afterwards Dr UNDERHILL, *in the Chair.*

I. *Dr Skene Keith* showed (1.) THREE MALIGNANT OVARIAN TUMOURS. (2.) TWO SMALL OVARIAN TUMOURS, one showing commencement of a cyst in the broad ligament. (3.) SMALL OVARIAN TUMOUR, removed from the pelvis of a patient who had been confined to bed for ten years. As the tumour began to grow the pain from which she suffered gradually disappeared. The tumour was jammed down into the pelvis, but there were no adhesions. The patient has made a good recovery, and is now going about. (4.) A UTERINE FIBROID, 15 lbs. in weight. This was removed from a patient 58 years of age. She had ceased to menstruate at 50, and there had been no indication of any tumour until eight months ago. It had grown rapidly during the past two or three months. The cavity of the uterus measured 12 inches across, 10 down one side, and 6 down the other. It was quite smooth and not villous, as it usually is. The operation was a simple one, only lasting 38 minutes.

II. *Dr Milne Chapman* showed for Dr Angus Macdonald THE OVARIES WITH ADHERENT TUBES, removed from a patient in the Royal Infirmary by abdominal section. The ovaries were small and hard, and each had a coil of thickened, slightly dilated tube firmly adherent to it, and so close was the incorporation that each mass had, on superficial examination, the appearance of being simply an enlarged ovary. The patient made an excellent recovery. He also showed (1.) MICROSCOPIC SECTIONS OF (*a*.) HEALTHY UTERUS, from a girl, aged 16, who had never menstruated; and (*b*.) SECTIONS MADE FROM THE UTERUS OF A WOMAN, aged 21, who died suddenly 3½ days after the onset of an ordinary menstruation. In the latter specimen there was a complete absence of the surface epithelium, and an evident loss of the superficial layers of the mucous membrane. The epithelium of the glands was preserved, but was swollen and near the surface desquamating. The cells of the matrix were swollen and granular, but showed no signs of fatty degeneration. The muscular wall was congested and thickened, and the fibres around the deep ends of the glands were in a condition of active proliferation. (2.) SECTIONS OF PORTIONS removed from the case, already described to the Society by Dr Angus Macdonald, of "Lupus Vulvæ." The first section was one of a finger-like hypertrophy, springing from the side of the labium majus, close to the entrance to the vagina. It was completely surrounded by a thick layer of epithelium, presenting a smooth surface externally, but on its deep surface irregular, with here and there branch-shaped prolongations passing into the substance of the mass. The central portion was made up of a mesh-work of connective tissue in all stages of development, in which there were numerous spaces, some distended with blood, others containing granular material, probably coagulated lymph, while others, especially near the surface, more resembled gland ducts, and were lined by regular epithelium. Immediately under the epithelial investing layer, especially where the prolongation passed inwards, there were numerous deeply stained round bodies, which, under a high power, were seen to be nuclei. These were grouped around the openings above mentioned, and were also sparingly scattered through the connective tissue. The cells, of which these were the nuclei, were very delicately stained, and some of them were of considerable size and contained more than one nucleus, and it was apparently from those cells that the connective tissue was developed. These cells were very similar to those met with as endothelial plates in gummata, tubercle follicles, etc. Three other sections taken from different parts of the same case showed a similar condition in an evidently further advanced state, the cells being present in greater numbers, and in one of the specimens being so crowded together as to have led to breaking down and ulceration. A section made from a hard wart-like structure over the mons veneris had all the characteristics of an ordinary wart or papilloma, with, in addition, a few cells similar to those existing in the other specimens sparingly scattered through the connective tissue. *Dr Chapman* also showed a PLATE, in the second volume of Ziegler's *Text-Book of Pathological Anatomy*, of a section from a patch of lupus vulgaris, and pointed out that in every respect the condition present in the specimens shown corresponded with it, and that the description given by Ziegler of the changes which occur in lupus of the skin would apply perfectly to the appearances found in his own preparations. He had no doubt, therefore, that Dr Macdonald's case was one of true lupus.

III. *The Secretary* read for Dr A. S. Currie of Lydney a paper on ANTE-PARTUM HÆMORRHAGE, WITH SPECIAL REFERENCE TO A RECENT FATAL CASE, which will appear in a future number of this Journal.

Dr Peter Young had had several cases of a similar nature. He had always regarded accidental hæmorrhage as a much more serious complication than placenta prævia. He did not think that the separation was due to uterine contractions. He recalled one case in which the placenta was adherent peripherally, but separated centrally. This seemed to him to show that it might separate without contraction of the uterus. Of course, so soon as any hæmorrhage begins the blood will accumulate between the uterus and placenta and break up the attachments. The difficulty of the treatment is due to the fact that the hæmorrhage usually begins before the onset of pains. In many cases also the os is comparatively closed. The coroner's remark as to the efficacy of the plug was quite absurd. Such a mode of treatment had been exploded long ago. The blood may be poured out between the uterus and placenta, and may burst into the amniotic sac, so that a very great amount of hæmorrhage may occur without any escaping into the vagina. In the last case which he saw the patient was pregnant of her fifth child. No one was with her when labour set in, and some blood came away with a gush. She was seen by no one for 18 hours afterwards. When Dr Young saw her there was much blood on the bed and on the floor, and the os was about the size of a florin. The pulse was weak and fluttering, and patient was in state of profound collapse. He injected ʒij. of ether, dilated the os with the hand, turned, and delivered. An immense quantity of clots escaped with the child, but there was no further hæmorrhage. Three quarters of an hour after delivery the woman died. Another case which he had was one which well showed the futility of the plug as a means of checking hæmorrhage. The woman was in her ninth pregnancy; labour had gone on for some time, and there was no external hæmorrhage at all. The patient was pulseless and blanched. The head was at the vulva. He completed delivery by pressing on the fundus, and the placenta and an enormous quantity of fluid blood and clots came away with the child. The patient made a good recovery. As a result of his experience in these cases, he would lay it down as a rule that the patient should on no account be left until delivery was effected, and that this should be promoted by dilatation of the os and by instrumental interference whenever necessary.

Dr Leith Napier agreed with Dr Young in the main as to his treatment of these cases, but he thought we were bound to judge each case on its merits. He had seen several cases presenting very various features, and he did not think any hard and fast rule could be laid down as to their management. In one case he had seen recently he was sent for when labour had advanced some time, as the midwife had declared the child dead. There was a great deal of hæmorrhage when he arrived, but the child was born alive, and both it and the mother did well. In another case a patient in her third pregnancy had had profuse bleeding at the seventh month, lasting from time to time for a week; up to that time he saw no reason for very active interference, but the hæmorrhage became more profuse, and he dilated and delivered the patient. In another case which he attended four years ago the patient was pregnant of her seventeenth child: complete placenta prævia had been diagnosed, and bleeding of varying amount occurred frequently during the last two months, but she was delivered at full time by version.

Dr Playfair agreed with Dr Young in most of his remarks, but felt bound to differ from him in regard to the necessity of staying with all patients without regard to the seriousness of the case. He held that the practitioner is bound to use his own discretion in each case, and to judge of its danger by the amount of the hæmorrhage and its effects on the patient. He thought that in the case related by Dr Currie the attendant was quite justified in doing as he did, and that the remarks of the coroner were certainly uncalled for. There was no reason for believing that the amount of hæmorrhage was sufficient to account for death, and that we were bound to look to the heart for the explanation of the untoward result.

Dr P. A. Young considered the remarks of the coroner certainly uncalled for, and suggested the propriety of the Society expressing its formal dissent from them.

Dr Underhill said he was sure every Fellow of the Society would sympathize with the practitioner in this case. He disagreed entirely with the view of the case taken by the coroner, and thought the medical man was quite justified in his treatment of this case. There certainly was no indication for plugging the vagina, and so far as one could judge death seemed the result of the comparatively slight loss of blood in connexion with the diseased state of the heart. Probably had the patient kept her bed as she was told to do, she might have been alive to-day. He did not think it was competent for the Society to offer any formal protest against the coroner's remarks on the case, but held that every Fellow of the Society had a right to express his individual disapproval of them. He himself felt they were entirely unwarranted.

IV. *Dr Leith Napier* read his paper on PUERPERAL ALBUMINURIA, REFLEX PARALYSIS, AND ECLAMPSIA, which will appear in a future number of this Journal.

The discussion was adjourned until the next meeting.

Part Fourth.

PERISCOPE.

MONTHLY REPORT ON THE PROGRESS OF THERAPEUTICS.

By WILLIAM CRAIG, M.D., F.R.S.E., Lecturer on Materia Medica, Edinburgh School of Medicine, etc., etc.

EXTRACTUM STIGMATA MAIDIS IN DISEASES OF THE HEART.—During the past three years Dupont has employed this extract in heart diseases with very good results. The extractum stigmata maidis reduces the action of the heart and increases diuresis. It is, as a rule, well tolerated. As a rule, its diuretic action is manifest on the first day after it is administered, and not unfrequently this action increases until after the third day. The amount of water excreted often increases from 500 grammes to 1500 and 2000 grammes (O. j.-O. iv.) It is especially indicated in diseases of the heart with œdema of the lower extremities, or general hydrops, in which class of cases it displays its power as a diuretic. As the œdema disappears the blood supply throughout the system is better regulated; the pulse beat is more regular, the heart's action is slower and more rhythmical. While the general condition of the patient improves rapidly, dyspnœa does not seem to be influenced by the medicament. In cases of hypertrophy, contractions, and insufficiency, the same results were always noted. The reason why this drug deserves praise is because it is so well tolerated by all the patients. When compared with digitalis it acts more rapidly, while there is not so much difference between its action and that of convallaria majalis. In the beginning Dupont always administed the drug alone, until he had carefully studied its action, after which he combined with it bromide of potassium, iodide of potassium, and milk. With regard to the dose, the largest amount given was 3 grm. (3¾) three times a day, one hour before each meal, with a little syrup. Generally half this quantity was sufficient to bring about a diuretic action (*Centralblatt für die Gesammte Therapie*). — *The Therapeutic Gazette*, June 1884.

IODIDE OF POTASSIUM IN ASTHMA.—The favourable observations of Germain Sée, Winternitz, and others, with iodide of potash in asthma, have been verified. Frensdorf, who recommends it as a prompt and efficient remedy that cannot be compared with any other drug, employs it in this affection. He dispensed it in doses of 3 grammes (gr. xlv.) three times daily. Not unfrequently the dyspnœa yields the same day; if not, smaller doses were repeated the following day. The catarrhal condition that usually accompanies an attack was treated with 1·5–2·0 grammes (gr. xx.–gr. xxx.), continued for some time. In the author's estimation this plan of treatment also did much good as a prophylactic, if not to keep them away entirely, then to lengthen the intervals between the attacks. Iodism, when present, is no reason why the remedy should be suspended; the symptoms disappear very rapidly, and the treatment can be continued (*Mittheilungen des Vereins der Aerzte*).—*The Therapeutic Gazette*, June 1884.

USE OF THE OLEATES.—The marked success that has attended the use of the oleates has induced Dr Shoemaker to experiment with fresh compounds, and he reports (*Med. Bulletin*, vi. 38) that he has obtained valuable results from the use of the oleates of nickel and tin. The nickel oleate is prepared by the double decomposition of nickel sulphate and sodium oleate. It is described as a green amorphous, waxy, tasteless substance, having a most decided astringent action, almost bordering upon the effect of a caustic. In cases of chronic eczema of the extremities, where the skin was hard and leathery, it is said to have given good results, and is now being tested upon old ulcers and cancerous affections of the skin. An ointment is used of the strength of 15 grains of the oleate to one ounce of lard. The tin oleate, as prepared by the double decomposition of tin chloride and sodium oleate, is grayish-yellow, of an unguent consistence, and has a marked metallic taste. It has been found of great utility in giving lustre to diseased nails that have become abnormal or deficient in growth, and to assist by its local action in overcoming split and soft conditions of nails that often follow certain skin affections and external injuries. Combined with a little carmine, it is said to form an elegant toilet article, imparting a beautiful polish to the nails, and by its astringent action modifying the ragged and attenuated state of the skin at their base which gives rise to the troublesome affection of "agnails" (*Med. Bulletin and Pharm. Journal*).—*American Druggist*, June 1884.

THE USE OF SALICYLIC ACID IN THE TREATMENT OF LUPUS VULGARIS.—I have for some time employed salicylic acid, in the form of ointment, as a remedy for eczema of the scalp, and impetigo contagiosa occurring in children, with the most satisfactory results, cases that have defied other treatment yielding rapidly to its agency, and I have been induced to make a further trial of it in other skin affections. By the kindness of Mr Rigby, surgeon to the Doncaster Infirmary, I was permitted to employ it in a very bad case of lupus exedens, which had been for some time under his care. The patient, a woman, about 25 years of age, had her face terribly disfigured, the ulceration having destroyed one *ala nasi*, the whole of the cheek and eyebrow being also involved. She had been in the hospital before, and had improved under treatment with Donovan's solution and a visit to Harrowgate. But on her return, although she was kept under observation and treatment, fresh tubercles developed, and the parts that had cicatrized soon became again involved, and she was re-admitted to the institution. I first tried an ointment of 15 grains to the ounce of vaseline, which was of no use; I then increased the strength to a drachm, and then to a drachm and a half to the ounce. The ulcers soon began to heal, no fresh tubercles appeared, the cicatrices became soft, and lost their shiny, unhealthy appearance, and the skin of the face is now almost sound. She was taking a mixture containing Donovan's solution and the liquor ferri dialysati. But as this had been administered without apparent benefit before admission, I think it is fair to give the credit to the external remedy. I have not heard of salicylic acid being employed before in the treatment of this particular disorder, and its action seems very satisfactory, especially as it does not appear to cause irritation (J. G. Marshall, M.B., Cantab., M.R.C.S., House-Surgeon to the Doncaster Infirmary).—*British Medical Journal*, June 1884.

PERISCOPE OF OTOLOGY.

By Dr Kirk Duncanson, Senior Surgeon to the Eye, Ear, and Throat Hospital, 6 Cambridge Street; Lecturer on Diseases of the Ear, Edinburgh School of Medicine.

Dr Boucheron, in a memoir addressed to the Académie des Sciences on the pseudo-meningitis of the deaf and dumb, asserts that the phenomena exhibited by the deaf and dumb, such as difficulty in walking, nervous fits, and violent attacks of anger, are not due, as hitherto supposed, either to cerebro-spinal meningitis, or to primary inflammation of the labyrinthine cavity of the ear, but to over-stimulation of the nerves of the labyrinth. Dr Boucheron has propelled air through the Eustachian tube into the middle ear of young deaf and dumb patients. The symptoms enumerated above disappeared; they also manifested a slight auditory faculty. After aural catarrh, subsequent to measles, scarlet or typhoid fever, the Eustachian tube becomes obliterated to the entrance of air into the tympanic cavity, and the air in the cavity becoming absorbed, the atmospheric pressure pushes in the drumhead and ossicles with undue force on the contents of the labyrinth. The labyrinthine fluid, thus pressed against, communicates the pressure to the terminal expansion of the auditory nerve in the labyrinth. According to Dr Boucheron, these phenomena are the origin of many morbid conditions. If the nerves of the semi-circular canals be pressed upon, the patient can neither stand, walk, nor hold up his head. Pressure on the auditory nerves provokes buzzing and deafness. If the nerves of the ear be pressed upon, the impression is transmitted to the pneumo-gastric, spinal accessory, the third, fourth, fifth, sixth, and seventh cerebral nerves; the cervical, brachial, thoracic, dorsal, and lumbar spinal nerves. The results are vomiting and nausea; the head is thrown backwards; there are facial contortions, and grinding of the teeth, with spasmodic movements of the eyelids and arms. In pseudo-meningitis the nerves are submitted to considerable pressure. In the simple form, where meningitic symptoms are absent, a deaf and dumb condition is often provoked. The remedy, according to Dr Boucheron, is to introduce air into the middle ear as soon as the symptoms are exhibited.—*British Medical Journal*, 5th July 1884.

OCCASIONAL PERISCOPE OF DERMATOLOGY.

By W. Allan Jamieson, M.D., F.R.C.P., Extra Physician for Diseases of the Skin, Edinburgh Royal Infirmary; Lecturer on Diseases of the Skin, Edinburgh School of Medicine.

Treatment of Wens by Ethereal Injections.—M. Vidal has of late successfully used this plan of treating wens. The ether sets up inflammation of the cystic contents, and finally induces suppuration of the cyst itself. This it effects without producing any of the painful sensations or constitutional symptoms which are caused by throwing it into the circulation as a stimulant of the system at large. The ether should be as pure as possible; that at 65° answers well, and it is injected with an ordinary subcutaneous syringe. For wens of the face and forehead, which are not larger than a hazel nut, no more than five or six drops need be injected at a time. Larger tumours of the scalp may require ten drops, part of which, owing to want of elasticity of the cyst walls, is liable to escape on the withdrawal of the syringe. As a rule, the injections should be suspended so soon as the cyst begins to suppurate. A wen, the size of a hazel nut, will require two or three injections of five drops. If as large as a walnut, ten drops must be injected four or five times. When after these injections the wen becomes reddened and softer, and is the seat of a slightly painful sensation of throbbing or heaviness, they are to be stopped. The tumour is now punctured at its base, from which issues a jet of purulent fluid; next, the contents of the cyst are discharged in the form of a whitish mass, mingled with the shreddy detritus of the walls. By the fifteenth or twentieth day the whole contents have been discharged, and merely a small indurated lump remains, which finally becomes flattened and imperceptible.—Lermoyez, *Bull. Gén. de Thérapeutique*, 30th Nov. 1883.

THE THEORY OF THE PERSPIRATION.—Unna, who is already well known in connexion with questions affecting the functions and structure of the skin, has given a *résumé* of his views in *Schmidt's Jahrbucher*, vol. cxciv. He maintains that it has been too readily assumed that the sensible perspiration is produced solely by the sudoriferous glands. It is true that on the palm of the hand drops of sweat can be seen to issue from the funnel-shaped pores which are the openings of their excretory ducts. Yet this may not proceed alone from the convolutions of the sudoriferous glands. It is known that the tissue-juice which circulates freely in the space included between the spinous cells and the granular layer easily passes over, under the pressure caused by its accumulation at this level, into the lumen of the excretory ducts, and thus escaping at the pores, may readily be mistaken for a purely glandular secretion. In the sudoriferous, as in many of the salivary glands, two different kinds of secretion appear to be formed, dependent probably upon different conditions of the organs, according as they are acting after rest, or in a state of partial exhaustion from fatigue. The clear glassy kind of secretion produced under ordinary circumstances is quite different from the profuse watery sweat called forth by a vapour bath, or by pilocarpine. Again, the face, throat, and back of the neck sweat easily, the palms of the hands much less so (except in the subjects of hyperidrosis manuum). Yet the last named region is much more fully supplied with sudoriferous glands than any of the others. The convolutions of the sudoriferous glands seem to be the source of the fatty acids to which the sweat owes its acid reaction. Smooth muscular fibres have been discovered between the tunica propria of these glands and their epithelium. These, Unna believes, are intended to maintain a greater or less degree of tension of the glands, and thus compress more or less the glandular epithelium. Under slight tension, the lymph current washes out from the glands a secretion poorer in organic products; under strong tension, one laden with such products. "Clammy sweat" is that secreted under maximal compression by the glandular elements: in this the sympathetic co-operates energetically, and during its effusion the bloodvessels of the skin contract, and the mucous membranes become pale. To explain the occurrence of a dry, hot skin, it is probable that the overheating of the skin, or of certain of its elements, which takes place in quickly rising fevers, accompanied by cutaneous inflammations, is what prevents the usual increase of sweat by heat. This effect, Unna conceives, is brought about by means of a third factor, hitherto unnoticed, viz., the expansion of the epidermis by heat. This expansion is familiarly exemplified by the corrugated condition of the hands which is caused by immersing them in hot water, but still more unequivocally by the rapid formation of blisters under the application of dry heat. Now, there is a point within the epidermis at which the effect of an increase in its volume is greater than at any other, and this is the fissure-like opening formed by the passage of the spiral canal of the sudoriferous duct through the basal epidermis, Œhl's stratum lucidum; this may contract till it becomes impermeable through swelling of the epidermis caused by long soaking, as in chronic eczema, or through its rapid overheating and expansion, which will account for the dryness of the skin in scarlet fever and erysipelas. When the local affection subsides in the one case, and the fever declines in the latter, sweat again makes its appearance. As our opinions alter with regard to the sources of the perspiration, so do our opinions as to certain skin diseases. Thus excessive perspiration of the feet could scarcely be so easily cured by astringent remedies or anti-eczematous applications, if it were actually a disease of the contorted sudoriferous glands buried deep in the subcutaneous fat. But no explanation is simpler than that which makes it consist essentially in a certain penetrability, as yet imperfectly understood, of the spinous layer by the normal tissue juice, whereby, even though appearing on the healthy epidermis, it closely approximates to eczema. Seborrhœa is another instance. We are accustomed to attribute excessive lubrication of the skin to the action of the sebaceous glands. Unna expresses his conviction that the oily as well as the dry form of seborrhœa has nothing to do with the sebaceous glands. The former exhibits a pure hypersecretion of the sudoriferous glands, the latter a superficial catarrh of the skin, with formation of scales, which are more or less lubricated by the normal secretion of the same glands. In acne, which essentially depends upon a pure keratosis confined to certain regions of the skin, the excretory ducts of the sebaceous glands are attacked by excessive cornification; the secretion of these glands is demonstrably enclosed in sacs between the horny lamellæ, and yet the skin is always well lubricated, never brittle, nor eczematous. It is lubricated from beneath by the sudoriferous glands. Unna has apparently demonstrated that the conception of the secretion of sweat as a process confined to the glands must be abandoned in favour of a theory more complicated indeed, but more in accordance with actual relations,—*the theory, namely, that various organs take part in the performance of the perspiratory function.*—*Journal of Cutaneous and Venereal Diseases*, March 1884.

TRICHORHEXIS NODOSA.—Professor H. Eichhorst relates a case of this curious disease which seems especially common in medical men. The hairs affected after soaking in strong caustic potass solution, and then in a preparation of osmic acid, were found to have their medulla largely impregnated with fat. He thinks that this fatty infiltration of the medulla led first to an increase in size of the medulla at points here and there in the shafts. This led secondarily to splitting up the cortical substance, and at last to a rupture of the flat cells which bind the fibres together. No hairs save those which possessed a medulla were diseased.—*Zeitschrift für Klinische Medicin*, April 1884.

A PERISCOPE OF MEDICINE, CLINICAL AND PATHOLOGICAL.

By G. A. GIBSON, M.D.

LOCOMOTOR ATAXIA IN WOMEN.—Möbius has within the last twelve months watched five cases of *tabes dorsalis* in women, which form the basis of this paper. Four of these cases were of syphilitic origin; but in the fifth case, although a suspicion of this disease existed, the cause was not so clear. The author points out that in these instances of ataxy there was no other cause save syphilis,—no chills, strains, accident, alcoholism, or sexual excesses, the latter of which can scarcely, he thinks, occur in chaste women. It is well known that, excluding prostitutes, syphilis is about eight or nine times rarer in women than in men, and another fact is also recognised that tabes only occurs in about one woman for ten men. Is syphilis to be called the cause of ataxy? Every case of syphilis does not cause ataxy, but is ataxy always preceded by syphilis? We know that there is one other change which induces tabes — ergot-poisoning, and Möbius is inclined to think that, if we admit syphilis and ergotism as poisons inducing tabes, it is possible that other poisons, such as those of many an infectious disease, may cause it also. The author concludes by showing how unimportant a part heredity plays in the causation of tabes dorsalis, referring to a former paper by himself, which showed that of sixty-one ataxic patients only one had any member of his family affected by the same disease, and only six had any family history of nervous affections.—*Centralblatt für Nervenheilkunde, Psychiatrie, und gerichtliche Psychopathologie*, 1st May 1884.

LOCALIZED PERSPIRATIONS IN LOCOMOTOR ATAXIA.—Raymond and Artaud describe a case of tabes, dating from the campaign of 1870-71, and resulting from syphilis. The patient presented the uncommon symptom of perspirations following every meal and *confined to the right half of the head, face, and neck*, as far as the shoulder. The temperature of the right side was at the onset of the hyper-secretion 33°·6 C. (92°·48 F.), and of the other side, 32°·8 C. (91°·04 F.) There was no change in the size of the pupil at the time.—*Revue de Médecine*, 10th May 1884.

THE PATHOGENETIC CONNEXION BETWEEN DISSEMINATED SCLEROSIS AND ACUTE INFECTIOUS DISEASE.—We have in a former number referred to a paper by Marie, in which it was contended that acute infectious disease was at times the means of initiating disseminated sclerosis. He continues the study of this subject, and discusses the probable pathological changes. He believes that it originates as an arteritis, with, according to Ribbert, an increase of round cells in the perivascular space, which ultimately become converted into fibrous tissue. The factor leading to this irritation bears, he believes, an intimate relation to the poison of the disease which preceded, and is, in fact, of an infectious origin. He also refers to what we imagine most physicians have had experience of, that various forms of paralysis are not infrequent after typhoid fever. He therefore concludes that in typhoid fever and in other infectious maladies there is a period of secondary or tertiary accidents, analogous to what appears in syphilis.—*Le Progrès Médical*, 10th May 1884.

THE INFLUENCE OF CEREBRAL LESIONS ON THE TEMPERATURE.—M. Richet made a communication on this subject to the *Académie des Sciences*, demonstrating by experiment that lesion of the surface of the brain produced a rise of temperature over the whole body, which might reach 42° cent. A cauterization produced the same effect as a puncture. He therefore contended that there exists a true traumatic cerebral fever which is not due to infection.—*Le Progrès Médical*, 3rd May 1884.

THE CORTICAL CENTRE OF THE INFERIOR FACIAL.—Dr Raymond, after detailing a number of cases with facial monoplegia, concludes that the inferior facial has its cortical centre in the lower part of the ascending parietal convolution. He reviews the physiological experiments made on this region of the brain, and contends that the results of these agree with clinical and pathological observations. The centre of the movements of the face is in animals low in the scale ill-defined, but as those higher in the scale are examined, it becomes more precisely differentiated. It is early seen to be situated in the postero-inferior part of the frontal lobe. In the monkey, which is most nearly related to man in organization, it occupies the inferior part of the ascending frontal as well as the most inferior part of the ascending parietal, while in more highly organized man it is confined to the latter region.—*Gazette Médicale de Paris*, 31st May 1884.

The Microbe of Yellow Fever.—M. Rochard, at the Académie de Médecine, gave a verbal account of a work by M. Domingo Freire of Rio de Janeiro on the above subject. According to the author, the organism is an alga which appeared as transparent rods joined in couples, or as cryptococci cells, which were fertilized by pairing. To the cryptococcus, which is the active agent, he has given the name of *cryptococcus xanthogenesis*. He found the organism in the soil of cemeteries where yellow fever patients had been buried, and in the soil of the city. He has inoculated animals with this, but finds dogs and poultry specially resist its influence. He has performed 400 preventive inoculations of an attenuated virus on man.—*Le Progrès Médical*, 10th May 1884.

PERISCOPE OF GYNÆCOLOGY AND MIDWIFERY.

By J. Milne Chapman.

Discussion on Puerperal Fever at the New York Academy of Medicine (*New York Medical Journal*, 15th Dec. 1883, and 16th Feb. 1884; *New York Medical Record*, 16th Feb. 1884).—The discussion was opened with a paper on "The Prevention and Treatment of Puerperal Fever," by Dr Gaillard Thomas. He first reviews the conditions of the puerperal woman which render her a prey to so many and dangerous disorders. Amongst these he mentions the hyperinotic state of the blood, giving rise to a tendency of the formation of thrombi, and constituting a most prolific ground for the development of sepsis and zymosis. Second, to the nervous system being in a plus state of sensitiveness and excitability; and thirdly, he referred to the great additional development of lymphatics and vessels which occurs during pregnancy. He insists upon the almost universal occurrence of rents, tears, or other injuries to the cervix, vagina, or vulva after an ordinary labour, and then states that—"Were we to take some of the lochial discharge from the vagina, after the atmosphere has acted upon it, and, abrading the inside of the finger with a lancet so that it bleeds slightly, apply this freely to the denuded surface, and allow it to become dry there, its irritating character would soon become evidenced by a burning sensation in the part, a smarting extending up the hand, and on the next day signs of a slight local inflammation, with a little lymphangitis, would be noticed. This would probably last only two or three days—merely long enough to demonstrate the fact that the fluid is an irritating one, but not sufficiently poisonous to cause erysipelas or severe angeioleucitis." In ordinary cases the lochia do not act in this way when they come in contact with the lacerations in the genital tract, but " should some ferment or specific poison gain access, it will act as rapidly and as decidedly as a little yeast added to dough." He then sketches the usual course of puerperal fever, and in regard to its pathology states his belief that "puerperal fever is puerperal septicæmia, though we do not at present know the exact nature of the infecting poison." As to the methods by which it can reach the parturient tract, he says there are two, and only two—*first*, by the atmosphere; *second*, by foreign bodies brought in contact with the patient during or after her delivery. He then gives a series of ten prophylactic measures which should be adopted in *all* midwifery cases, and adds his opinion that the parturient woman "should be treated as one about to go through the perils of a capital operation." For treatment he recommends the administration of morphia, and the frequent and vigorous use of antiseptic vaginal douches, followed by intra-uterine douches should the former fail to relieve symptoms, followed in extreme cases by curetting the interior of the uterus, or sponging it out. The danger of intra-uterine injections he regards as being less than the danger arising from the neglect of their use. For controlling the temperature he trusts to cold baths, or the use of a rubber tube coil in the form of a mat, covering the abdomen, through which a constant stream of iced cold water is made to pass. Dr Polk opened the discussion, and agreed with all that Thomas advocated. He stated that he made a point, when septicæmia threatened, of examining the cervix through a Sim's speculum, and that he had frequently in such cases applied carbolic acid directly to suspicious-looking points, with marked benefit to the patient. Drs Hunter and Partridge also expressed agreement, and stated that they had followed out Dr Thomas's line of treatment with decided success. At the adjourned meeting Dr Fordyce Barker opened the discussion in a paper in which he expressed his conviction that Dr Thomas had been influenced by preconceived theories, and stated that the paper had "a plausible air of scientific truth which was very taking." He, however, could not agree with Dr Thomas that all cases of puerperal fever were septicæmic in origin, or that the normal lochia had the poisonous characteristics which Thomas ascribed to it, and referred to the occurrences of epidemics of puerperal fever, which he did not think could be explained by the septicæmia theory. He believed that septic poisoning would explain the majority of cases occurring in hospitals, but stated his firm conviction that outside of them less than two per cent. of the puerperal diseases, and not one-half per cent. of the deaths, after childbirth were due to septicæmia. He dwelt on the hazardous depressing effect that all the prophylactic preparations advocated by Dr Thomas would have upon patients, and stated that "if all, or even a considerable part of the details mentioned are necessary 'to save thousands of lives which are now lost,' and to spare 'thousands of desolate households the sorrow of losing their female heads'—then it seemed to him evident that the State should make child-bearing a penal offence for all those families who do not have a sufficient annual income to make it possible to carry out all these requirements." He then expressed his convictions by giving a few general propositions. "In puerperal fever, as met with in private practice, we have to treat the consequences of some form of blood-poisoning. This may or may not be septic poisoning. In private practice, he thought it generally due to some occult, possibly atmospheric epidemic influence; in hospital patients, nosocomial malaria, often associated with septic poisoning. No treatment which interrupts the normal physiological processes—such as the retrograde metamorphosis of involution, the fatty transformation of the component fibres of the uterus, or the cicatrization of its internal surface by the exudation of organizable lymph, and the development of a new layer of mucous membrane, or the healing of traumatic lesions—can be justified, unless positive symptoms, now well understood in science, demonstrate their necessity. Antiseptic injections, both vaginal and intra-uterine, are of great service when the indications for their use are clearly shown by local signs or general symptoms, but they cannot be recommended with safety as a routine practice on theoretical grounds, as, for obvious reasons, they may be most detrimental in retarding the cicatrization of lesions and the other processes of normal convalescence, and are otherwise sometimes dangerous." In regard to antiseptic injections he showed that he had been an early advocate of them, and gave a rapid sketch of his experience of them, offering his reasons for their cautious and gradual abandonment to which he was led by the observation of disturbances and interruptions during the first week of labour which he traced to them. Dr Lusk dwelt upon the influence of the round bacteria as a means of rapid diffusion of the poisons in certain cases of puerperal fever, and emphasized his belief that germicide injections would be of no avail after the tissues had been invaded by these enemies; and he showed that in Vienna, in Prague, and everywhere the indiscriminate use of uterine injections had invariably added to the mortality. "With all the blessings from their use, with the indubitable fact that they have been the means of saving many lives, unless the indications for their employment are carefully restricted, it is to be borne in mind that they are likewise capable of adding to the risks of the puerperal state, and of swelling the death-roll from puerperal causes." Dr Hanks agreed with all Thomas's paper, and dwelt on he importance of "pure air," "absolute quiet," "judicious diet," and "proper antiseptics," as assistants to the midwifery practitioner. Dr Mundé subscribed to the views of Dr Barker "that there were some forms of puerperal fever which we could not call puerperal septicæmia." In his reply Dr Thomas guarded himself from being understood as regarding the lochial discharge as a poisonous fluid, which, by absorption by abrasions in the genital tract, gives rise to puerperal septicæmia, and referred to an extract from his paper which is given above.

WHETHER IS CORROSIVE SUBLIMATE OR CARBOLIC ACID PREFERABLE AS A DISINFECTANT IN MIDWIFERY PRACTICE? (Stadfeldt of Copenhagen, *Centbl. f. Gynäk.*, No. 7, 1884).—In considering this question the writer first takes up antiseptics used prophylactically, and, second, therapeutically. For use as a disinfectant in maternity hospitals, he prefers carbolic acid, because of its being less likely to be mistaken for other substances. Its smell he regards as an advantage, enabling the physician to know that a disinfectant has been used. The colouring matter employed to distinguish the sublimate solution he objects to, as it gives rise to permanent stains on linen. The question of price is, in his country, out of consideration, as government supplies gratis carbolic acid to midwives. As a therapeutic disinfectant he was constantly in the habit of using carbolic acid. Occasionally, after frequent intra-uterine injections, he noticed slight symptoms of collapse. Hoping that, by using the sublimate solution, he would not require to make so frequent injections, he made use of it in seven cases where intra-uterine washing out was indicated. The strength of the solution used was 1 to 1500. In the first six cases the results were more satisfactory than he would have expected had he used carbolic acid, and fewer injections were required. In two of the cases there was slight diarrhœa occasioned, and in two slight tenderness of the gums, but these symptoms rapidly passed off. He noticed that it was not in proportion to the number of injections used that the likelihood of constitutional poisoning depended, but that some patients were extremely easily affected. In the seventh case, while an intra-uterine injection of 1 to 1500 was being carefully used on the fifth day post-partum, the patient suddenly complained of headache. Shortly afterwards diarrhœa commenced and sickness. The urine diminished in quantity, contained albumen, and ultimately was nearly completely suppressed. There was no salivation, but the tongue was tender, and on its under surface near the edges were several gray-coloured smallish ulcerated points. She died in five days. On post-mortem examination, no peritonitis was found, nor was there anything in the condition of the pelvic organs sufficient to account for the death. On the mucous surface of the large intestine, especially towards and in the rectum, there were numerous ulcerations, and the lower end of the small intestine was considerably congested. The kidneys were large, white, and fatty. No trace of mercury could be found in any of the tissues, but, notwithstanding this, the writer considers that the cause of death was mercurial poisoning.

OCCASIONAL PERISCOPE OF THE DISEASES OF CHILDREN.

By CHARLES E. UNDERHILL, M.B., F.R.C.P.E., Physician to the Royal Hospital for Sick Children.

CONGENITAL LIPOMA.—This paper deals only with local hypertrophies—general obesity is not included. The swellings are mostly found at a considerable distance from the heart, frequently on the fingers and toes; they may occur, however, on the occiput, back, abdomen, and other parts. No fat is found in the first half of intra-uterine life, and local hypertrophies originating then are complicated with myxomatous degenerations of the inner layers of the skin; those commencing in the second half of fœtal life are found complicated with an abnormal development of fat. The congenital lipoma differs from the adult form of lipoma in being generally diffuse and not enclosed in a capsule. Five cases are given; in one, a child aged three, a large tumour was found in the lumbar region; as it was growing rapidly, it was removed; there was no capsule, and it was impossible to remove all the fat; much sloughing took place, and the child died in a month of exhaustion. In another case there was gigantic growth of the left foot, localized lipoma of the right thigh, diffuse lipoma of most of the abdomen and chest, and teleangiectasis of the right side of thorax; the child died of hydrocephalus and perinephritic abscess. In a third case, there was a diffuse lipoma of the lumbar region covering and concealing a small sac of spina bifida. The disease is not of frequent occurrence, as a pretty full collection of published cases shows.—A. Jacobi, M.D., *Archives of Pediatrics*, February 1884.

LARGE TUMOUR ENVELOPING THE HEART.—Dr Park relates a case where a child, aged seven, was brought to hospital suffering from great dyspnœa; pulse 150; respirations 40; temperature normal; a bulging forward was noticed on the left side of the chest; this bulging looked like an aneurism, but there was no bruit; superficial vessels greatly dilated over the prominent part, dulness over the same area. First cardiac sound very weak, second inaudible. Death took place in a week, during an attack resembling angina pectoris. Necropsy showed a large tumour completely enveloping the heart, which was "embedded in it as a fruit stone is in its fruit." The large vessels ran through the mass, and were diminished in size from pressure; great general emaciation. The origin of the tumour could not be traced; it was of the size of a small child's head, and proved to be a round celled sarcoma; other organs healthy.—*Lancet*, May 17th, 1884, p. 890.

POISONING BY CHLOROFORM TAKEN INTERNALLY. — In the *Archives of Pediatrics* for February 15th, Dr M'Ardle relates the case of a child aged six years, who was given, in mistake, a dessert-spoonful of Squibb's chloroform; this was followed by general collapse, heart beats hardly to be felt, teeth clenched, limbs flaccid conjunctiva gave no response, insensibility complete; consciousness slowly returned after half an hour's use of Gaeffe's battery; a rapid recovery followed; the recovery may be due to the fact than an emetic, which had acted well, had been given before she was seen by Dr M'Ardle.

Treatment of Congenital Cephalhæmatoma by Aspiration.—Dr P. French recommends this as the routine treatment in these cases. In three cases out of six which he has seen this treatment was adopted, and was followed by a rapid disappearance of the tumour; the operation should be performed within the first week. In two of the remaining cases, which had been left to nature, an incision had to be made owing to threatened suppuration.—*Archives of Pediatrics*, March 15th.

Two Cases of Malposition of the Kidney.—Both were female children, each three months old, and each died of chronic gastro-intestinal catarrh; no urinary symptoms. In Case I., supra-renal capsules in normal position, without reference to kidneys. Right kidney normal in every respect. Left kidney lies in the hollow of the sacrum, about one-eighth part reaching above the promontory; it is firmly attached by vessels and connective tissue; has three arteries of supply, two arising from the aorta near the bifurcation, and the third, largest, from internal iliac; ureter about half the length of right, otherwise normal. Case II.—Right kidney in normal position, but has a double hilum, each supplied with its own arteries, veins, and ureter. Left kidney has a similar double hilum; it lies one-half above and half below the promontory of the sacrum. Arterial supply from lower end of aorta and internal iliac, by three arteries. A drawing of each case is given. For bibliography reference is made to an article in the *Glasgow Medical Journal* for August 1883, by Dr Neuman. These were the only abnormalities of position in 550 autopsies.—*American Jour. Obstet.*, February 1884. W. P. Northness, M.D.

Two Fatal Cases of Diabetes Mellitus in Children.—Diabetes is a rare disease in children, and these cases are of interest from the etiological point of view. Louisa W., aged seven, took by mistake, within two days, an ounce of bromide of potash; she was a delicate child, "of nervous temperament," but otherwise healthy. The acute symptoms of bromism passed off, but a month later she began to pass large quantities of urine; three months from taking the bromide the urine was of sp. gr. 1030, contained sugar, and amounted to one gallon a day. The quantity soon after increased to six quarts, and some albumen was found in it as well as the sugar. Death twelve months after the poisoning; both kidneys were found to be diseased.—Clara P., aged 14, had a second attack of scarlatina, followed by a slight attack of nephritis, from which he soon recovered; two months later she was found to be passing arge quantities of urine, of sp. gr. 1038, and containing sugar. Death ollowed from phthisis in six months from the attack of scarlatina.—*Amer. Jour. Obstet.*, January 1884. Leonard Weber, M.D.

MORPHINE BY SUBCUTANEOUS INJECTION IN INFANTILE CONVULSIONS.—The author, who some years ago published several cases of puerperal eclampsia in which he successfully used what are called "heroic" doses of morphia, was led, by the analogy of the two diseases, to try this remedy in the convulsions of children. Two cases are given. Case I.—A child of 18 months had been in convulsions two hours, in spite of various remedial measures; one-sixth of a grain of morphia was injected; the convulsions ceased immediately and did not return. The child slept quietly for three or four hours, and awoke apparently well; a slight return of the fit next day readily yielded to a small dose of Dover's powder. Case II.—A child of 4 years had been in a violent convulsion for half an hour; a "good dose" of morphine was injected; the fit ceased within half a minute and did not recur; recovery quickly followed.—C. C. P. Clark, *American Journal of Obstetrics*, April 1884.

A CASE OF NEPHRITIS AFTER AN ATTACK OF VARICELLA.—In the early part of the present year, Henoch reported four cases of albuminuria as a sequela of varicella; the ages varied from two to ten years. The nephritic symptoms came on within a fortnight from the commencement of the disease, and lasted from two to four weeks; all recovered perfectly except the youngest, who was subject to constitutional syphilis. This paper drew the attention of Dr Rachel to a similar case in his practice where, after a sharp attack of varicella, on the eighth day of the illness, the feet, face, and hands were found to be greatly swollen, and the urine to be very scanty, high coloured, and albuminous. The child was very restless and ill. Under the use of a wet pack and diuretics, the attack soon passed off, and a week later the œdema was entirely away, and the urine normal. Before reading Henoch's paper, Dr Rachel had seen a similar case of albuminuria in connexion with varicella, but assumed without any evidence, that there must have been an unobserved slight attack of scarlatina. If further observation shows albuminuria to be at all a frequent sequela, we shall have to look upon varicella as a disease of more importance than we do at present.—*Archives of Pediatrics*, April 15th, 1884.

INCONTINENCE OF URINE IN CHILDREN.—This condition, though extremely common, has had but little attention paid to it in medical writings. Dr Adams, in a paper on the subject, points out that it is invariably due to some pathological state, and deprecates very warmly the cruelty and inutility of punishing children for an act which they cannot avoid, and argues that by careful study each case may be referred to the cause which underlies it, and that this cause can generally be removed. He divides the disorder into three classes—1, there is a constant dribbling day and night; 2, the incontinence is intermittent, but occurs by day as well as by night; 3, the commonest, the incontinence occurs only at night. This last variety is analogous to nocturnal emissions in the adult, and is referred to the same causes. One of the commonest causes of the incontinence is phymosis, with a collection of irritating smegma in the sulcus behind the glans. These cases are cured by circumcision. Other cases are due to the presence of a stone in the bladder, and must be treated by lithotomy. In these the symptoms are those mentioned in class 1, mainly a constant dribbling. The commonest cause of all is an irritability and spasm of the muscular walls of the bladder. The drug found of most service in such cases is belladonna, the dose being increased day by day until improvement results, or its physiological effects are obtained. A course of from three to four weeks is generally sufficient to effect a cure. The paper concludes with a full bibliography of the subject.—*American Journal of Obstetrics*, June 1884.

ON THE PROPHYLAXIS AND TREATMENT OF TUBERCULOSIS AND SCROFULOSIS IN CHILDREN.—Tuberculosis is exceedingly common in children, and evidences of it are found in more than half the children dying within the first six months, whose bodies are examined. The two objects of prophylaxis are, firstly, to combat the disposition to disease; and, secondly, to ward off infection. The first indication is fulfilled by providing good food, warm clothing, fresh air, a country life, and sea bathing. Infection, that is to say, the bacillus, for the whole paper is written from this standpoint, finds its way either by inhalation, by food, by some mechanical inoculation, or by general diffusion from some previously isolated patch. The commonest path is by inhalation, and accordingly we find the primary disease most frequently in the thoracic cavity, the disease commencing in the bronchial glands, in the bronchi, or in the lung itself. To save the child from the introduction of the germ in this way, we should instil into those who have charge of it the danger that may arise from sleeping with, kissing, living in a small confined room with parents or relatives already diseased, and insist upon the necessity of efficient ventilation. Infection by food is not so frequent, but it may be caused by the milk of a diseased cow; boiling the milk removes this danger; and tubercular mothers should not be allowed to nurse their children. Mechanical inoculation may take place from lupus, ulcerating scrofulous glands, or other open scrofulous sores; and possibly, though it has never been proved, from vaccination. Should future investigation prove that the infection of tubercle is spread from these sources, then far greater care than is now taken must be exercised in allowing children suffering from these disorders to associate with the healthy. Swollen scrofulous glands should be removed. The treatment of tubercle and scrofula, as there is no specific remedy known, is comprised in careful management of the symptoms, such as catarrh and diseases of the glands and bones, as they arise, in attention to general

;, and in the choice of a suitable climate.—Dr Förster, :*h für Kinderheilkunde*, Band. 21, Heft. 3.

MEDICAL PERISCOPE.

By Francis Troup, M.D.

IAN CHOLERA COMMISSION.—In the *Berlin. Klin. Wochensch.*, [o. 9, Dr Koch makes a fifth report of his commission regarding germs. Up to January of this year material from eight patients had been gathered. The cases followed each other rapidly, so that the autopsies were thoroughly carried out directions. Several of them, ending speedily and without :ation of other diseases, and the sectio being made very ter death, gave admirable subjects for examination. The :ope demonstrates the presence of bacilli similar to those n Egypt. Koch had left it undecided in his report of 17th ber 1883, whether those bacilli, like so many other bacteria, belong to the usual parasites of the human bowel, and only able to penetrate the mucous membrane under the influence cholera process. At that time marks were awanting by to distinguish those bacilli from other intestinal ones of very form. This want has happily been removed, for by more methods, out of the intestinal contents of pure cholera cases, :illi have been isolated and propagated by pure cultivations. act observations of the bacilli so cultivated led to the dis- of some very characteristic properties, with reference to orm and growth in the nutritive gelatine, by which they certainly differentiated from other bacilli, and the question iow be definitely answered whether those bacilli are usual of the bowel or exclusively to be found in the intestinal f cholera patients. For the first time, by help of this gelatine , the bacilli of cholera dejections and the bowel contents of corpses were demonstrated; and the bowel contents of other were similarly examined, and the cholera bacillus was present. Further, the bowels of several animals and other ices rich in bacteria were tested, but nothing like the cholera has yet been met. A good deal has thus been gained, for specifically endowed bacilli belong exclusively to the cholera , then little doubt would underlie the causal connexion n their appearance and the cholera process, even if the iction of the disease in animals did not succeed. But even latter connexion events seem to shape themselves favourably, eriments instituted on a few animals promise far reaching . Side by side with those labours the commission has been 'ed in expiscating the behaviour and relationships of cholera :utta. In cities beyond India, which are exposed to cholera m only at protracted intervals, the influence of sanitary improvements—for instance, introduction of good water, drainage, and such like—cannot be distinctly defined, because even repeated exemption of such places may be conditioned by mere accidents. On the other hand, in cities such as Calcutta, which have a considerable cholera mortality yearly, every measure which is hostile to the disease must have, as a result, a more or less noticeable and enduring lowering of the death-rate. Since 1870 cholera has suddenly and strikingly diminished in Calcutta; its death-rate used before that year to average 10·1 per 1000; since 1870 it has fallen to 3. This has been brought about by the introduction of good water, according to the unanimous verdict of the physicians there. This fact deserves the greatest attention, and points out how, in part, the disease may be successfully opposed. Koch then refers to the report of the French Commission, asserting that the micro-organisms found by it in the blood of cholera patients occur in, for instance, pneumonias and macular typhus, and have been often mistaken for bacteria, but are really nothing of the kind, but are elementary forms which have been already figured correctly by D. D. Cunningham in his work, *Microscopical and Physiological Researches into the Nature of the Agent Producing Cholera*, published in 1872. He thinks all observers are in error who consider those plasmic particles (*Formelemente*), the so-called *Blutplättchen*, to be specific organisms, or to have any ætiological connexion with cholera, as they are to be found in the blood of healthy men, and of those suffering from other diseases than the one in question.

ON THE COLOURING OF THE BACILLUS OF KOCH, AND ON ITS SEMEIOTIC IMPORTANCE.—Fränkel, *Ibid.*, Nos. 13, 14, says, where bacilli are found in the sputum there is present a *bacillary* destructive process in the respiratory organs. He prefers this term to tubercular, because tubercle is an anatomical, and tuberculosis a clinical idea, but the bacillus belongs to ætiology. The diseases established by it range from lupus and bacillary arthritis, through chronic phthisis and caseous pneumonia, to general miliary tuberculosis: a great series of anatomical and clinically very different processes being conditioned by the ætiological oneness of the bacillus, to call all those morbid processes tuberculosis would be, as it were, to epitomize syphilis by the name of gumma. The positive demonstration of bacilli in sputum gives a certainty to the diagnosis which cannot be attained by any other method of examination. This certainty materially enlarges our knowledge of the pathology of phthisis, and settles questions which are better solved by observation of the sick than on the dissecting table; for instance, there is no longer room for doubt that phthisis is, at least temporarily, curable. If the result of examination, conducted in the manner and with the precautions abundantly given in the paper, is negative, then the probability almost borders on absolute certainty that there is no bacillary destructive process within the respiratory tract. If the outlook for the future is a melancholy one when bacilli are found, so much the more comforting, in seemingly threatening conditions, is the failure to find them. The absence of bacilli warrants in many cases a diagnosis and prognosis, which, without this method of examination, would long have remained in suspense, and is therefore as weighty, and permits, within limits, as trustworthy conclusions as their actual presence. Some authors, as Balmer and Fräntzel, have attempted to credit the form of the bacilli and their relative quantity in the sputum with a prognostic value, but Fränkel negatives this idea, and says that no safe inference in that direction can be drawn from their size or number. On the other hand, if they begin to disappear, and this for some time, that is an unmistakable indication of the beginning of healing even although the physical signs show no change. But if prognostic inferences from size and number of bacilli must be confined in very modest boundaries, yet diagnosis from their presence or absence has made a gain which cannot be too highly esteemed. Here the knowledge of the physician has made an advance which casts into the shade the discovery of auscultation or percussion, or the introduction of the laryngoscope.

SURGICAL PERISCOPE.

By A. G. Miller, F.R.C.S.E.

The *New York Medical Journal* has published a most interesting lecture by Sir William MacCormac, delivered at the Bellevue Hospital Medical College. Sir William, in addressing the American students, selected as his subject his experiences in the Franco-German war. The whole lecture is most interesting, and the various incidents most graphically described. We have selected the following practical extracts:—"There are many reasons why such operations as resections should be performed late, after the primary inflammation has subsided, for, after that time, those cases in which amputation should be performed have been selected out, and, besides, the numerous small pieces of bone which are always found in comminuted fractures about the joints have become separated and have disappeared in the discharges, so that the amount of bone that can be saved may then be determined more accurately. . . . The wrist, ankle, elbow, and shoulder joints are best fitted for resections, while the knee and hip joints are least fitted for operations of this kind; and I think experience has amply shown that the statement that these joints had better be left alone is one of extreme utility. . . . Now, another thing which I think I have learned, and desire to teach you, is, to avoid probing gunshot wounds altogether, or as far as possible. I have seen great harm come from this practice, and the fact cannot be too strongly impressed upon you that the bullet itself is of very little importance in these cases. I know that nearly always the first thing that a patient who has been wounded will ask the surgeon is, 'Where is the bullet lodged?' and then he will expect to be relieved by its removal. I think that under these circumstances the surgeon is too often apt to be so inconsiderate as to try to please the patient and accede to his wish. Any one who has had much experience with gunshot wounds knows how easy it is to fail in finding the ball, and how difficult it often is to distinguish by the probe between a piece of lead and an exposed surface of bone, or a piece of fascia or a tendon, and in such cases, if he does not succeed in finding the bullet with the probe, he is very apt to search for it with his finger; then he tries with one forceps and then another to extract it, and in this way septic matter is almost necessarily introduced, so that a wound of a joint which might otherwise have healed perfectly without a particle of suppuration is doomed to suppurate, and possibly the whole limb will in consequence be lost. Besides, experience shows constantly how frequently bullets become lodged in muscles, bones, or some of the viscera, and there become encapsulated and never cause further trouble. The point I wish to insist upon is, that there is infinitely more danger created by the surgeon who attempts to search for and extract a bullet than would result from leaving half a dozen bullets to take care of themselves. In all the pathological museums throughout the world may be seen specimens of bullets lodged in lungs, liver, brain, and bones, where they had remained imbedded for years without impairing the functions of these organs. . . . This is another illustration of the importance of avoiding all interference with gunshot wounds. Professor Esmarch of Kiel, whose reputation you all know, preaches from the text, 'don't injure,' or 'don't do damage,' and refers to the interference with gunshot wounds; and I think that I have now said something to show you the importance of such a maxim. . . . If I were not afraid of tiring you, gentlemen, I should like to give you the evidence of distinguished surgeons, showing how successfully antiseptic surgery may be carried out on the battlefield. All surgeons have long been thinking and devising plans of carrying out this method in time of war, and it has been found that certain modifications can be advantageously made, and that certain of the minor details may be omitted. I think we have found that the spray of carbolized vapour may be eliminated, and that we may accomplish the same object by frequently douching the parts with a carbolized solution. Of late there have also been discovered many means by which antiseptic substances can be packed in a very small bulk, and so be easily transported. Though it would be interesting to describe some of these devices, yet they are too numerous for me to even mention at this time. One of the best preparations at our disposal, however, is iodoform, for it is easy of application, its bulk is small, and, for dressing such external wounds as I have spoken of, there must be a very great future before it." These statements are of great importance, coming from one with Sir W. MacCormac's experience.

Part Fifth.

MEDICAL NEWS.

University of Edinburgh.—The following are the candidates who have passed the second professional and final examinations:—A. M. Adams, M. S. P. Aganoor, N. E. Aldridge, J. H. L. Allott, M. Altounian, S. Arnold, E. H. Bannister, J. Barrie, G. B. Batten, J. B. Bawden, T. W. Bell, D. Berry, *A. Bissett, J. A. Blair, F. M. Blumer, B.A.; T. Bonar, F. F. Bond, J. E. Bottomley, *P. Bowes, H. Bramwell, H. R. Bramwell, R. A. Brewis, *D. M. Brown, *R. M'D. Brown, T. A. Brown, S. B. Burns, J. M. Cadell, E. K. Campbell, *E. Carmichael, W. R. Carter, L. M. F. Christian, T. G. Churcher, R. L. Clark, D. Cloete, J. G. Cossins, R. S. Coulthard, A. H. Croucher, W. L. Cullen, A. S. Cumming, T. B. Darling, H. H. Davies, T. L. K. Davies, J. D. Davies, T. W. Dewar, *D. G. Donaldson, D. R. Dow, M.A.; T. Easton, M.A.; E. Eckersley, T. Edwards, H. S. Fairbank, J. E. A. Ferguson, J. H. Ferguson, T. Ferrier, G. Fisher, W. S. Flett, A. Fraser, T. Fraser, M.A.; T. A. W. Fulton, C. H. Gage-Brown, W. G. Galletly, D. J. Galloway, D. F. Gardiner, L. R. Gray, F. G. Greenbury, E. Greenough, B. Griffiths, C. D. G. Hailes, *W. W. Hall, J. R. Henderson, T. M. Hodgson, W. A. Holmes, T. A. F. Hood, *R. Howden, R. S. Hubbersty, Dirk de Vos Hugo, J. Hume, B. E. Iastrzebski, J. O. Jones, G. H. Kenyon, M. A. Ker, D. O. Kerr, J. Kerr, W. V. M. Koch, D. Laing, W. Laing, C. A. Lane, *W. S. Lang, A. E. G. Langschmidt, C. N. Lee, A. W. M. Leicester, L. H. Le Merle, C. L. Lemprière, W. G. Little, M.A.; G. S. P. Loubser, W. W. R. Love, C. J. Macalister, B. F. P. M'Donald, A. G. Macdonald, W. C. M'Ewan, M.A.; J. M'Gibbon, A. MacGregor, D. MacGregor, M.A.; H. J. Mackay, W. B. Mackay, J. C. Mackenzie, *J. H. Mackenzie, M.A.; M. MacLaren, B.A.; A. Maclennan, J. M'Leod, B.A.; J. M'Myn, A. Macqueen, G. D. Malan, L. G. Mallam, A. Matheson, A. Menzies, W. J. van der Merwe, G. Michael, R. Mitchell, M.A.; D. Morgan, A. E. Morison, D. Mowat, W. J. Munro, B.A.; F. Murray, B.A.; B. H. Nicholson, J. Noble, F. B. O'Flaherty, *A. G. Paterson, M.A.; C. E. Paterson, *F. A. Pockley, J. M. S. Preston, E. F. T. Price, W. T. Prout, A. C. Purchas, T. R. Rait, *F. M. Reynolds, T. Rhodes, W. Richards, J. Rigg, A. L. F. Robertson, J. Robertson, J. C. Robertson, R. M. Robertson, A. J. T. Roux, J. Rutter, Y. S. Sanitwongse, T. S. Shaw, *F. H. Simmons, G. R. Smuts, W. Sneddon, J. S. Stephen, H. F. D. Stephens, S. H. A. Stephenson, *J. Stevens, M.A.; C. H. Stewart, B.Sc.; J. W. Stirling, J. Stuart, G. H. H. Symonds, J. C. Taylor, G. Thomson, R. S. Thornton, C. G. Thorp, J. Tod, Cecil G. Traill, George A. Tullis, J. W. O. Underhill, E. Walker, N. H. Walker, N. P. Walker, D. Wallace, T. A. Watson, S. F. Wernich, A. Westlake, R. H. A. Whitelocke, W. J. Will, *C. Wilson, A. B. Winder, J. E. Wolfhagen, J. C. Young, B.Sc. The following is a list of candidates who have passed the second professional examination:—W. A. Anderson, J. S. Archibald, J. W. Astles, A. G. Baschet, S. Beattie, C. N. Bensley, J. W. Black, R. Bone, W. F. Boycott, J. Brown, W. J. Cameron, C. Charleton, S. F. Clark, J. Cram, A. E. Curtis, D. N. P. Datta, J. W. Dawes, H. G. Dickman, A. Fisher, R. S. H. Freeborn, J. W. Gainer, J. Garvie, T. H. Gibson, A. E. Grant, J. W. Grant, A. E. L. Gray, D. M. Greig, A. C. Guthrie, S. P. Hallows, J. T. Harvey, F. W. Hennessy, J. R. Hill, J. J. Hoffman, R. E. Horsley, R. Howden, W. H. M. Ingham, H. Jamieson, J. P. Johnston, E. C. Kingdom, J. H. A. Laing, D. J. Lawson, E. L. Lees, *R. F. C. Leith, Æ. D. M. Macintyre, A. C. Mackenzie, C. J. R. M'Lean, R. H. Maclean, R. MacLelland, P. B. M'Nicol, C. C. Manifold, C. G. Matthew, *H. B. Melville, W. F. Menzies, D. M. Moir, *E. J. B. du Moulin, J. K. Murray, W. R. Nasmyth, W. B. Nisbet, E. S. Nutting, J. W. Pare, M. Paterson, T. J. Paton, J. H. Pringle, J. T. Richards, G. B. Ritchie, E. T. Roberts, F. C. Roberts, R. Robinson, A. M. Ross, J. R. H. Ross, D. W. Scotland, W. E. S. Scott, H. Scurfield, G. P. Smith, *J. W. Smith, R. Stewart, W. J. Thomas, F. C. Thorp, J. W. Travell, H. Ware, *C. H. Waters, A. B. Whitton, R. A. Wilson.

Those marked thus * have passed with distinction.

Royal College of Physicians, Edinburgh.—The following gentlemen passed their final examination at the sittings held on 5th July, and were admitted L.R.C.P. Ed.:—Thomas Lyons, Noakholly, Bengal; Bertal Hopton Scott, Bawtry, Yorks.; Alexander Gillespie, Ontario, Canada; Frank Broadbent, Collingham, Notts.; Frank Pearse, Exeter; John Traherne Williams, Ashburton, Devon; Alfred Hanson, Launceston, Cornwall; William Frederick Charles Rogers, Falmouth, Cornwall; Thomas Speedy, Coventry; James Cole Pincott, Romford; William Hooper Pinches, Highgate; Walter Edmund Shorland, Bristol; George Jones Revell, Plympton, Devon; James Stuart M'Cullough, Ontario, Canada; John Edward Wesley Anderson, Ontario, Canada; John Standish M'Cullough, Ontario, Canada; Ernest Amos Hall, Ontario, Canada; Maitland Thompson, London; George Frederick Seaman Arthy, Manchester; Coniston Spackman, Faringdon, Bucks.; William John Chambers, Ontario, Canada; Richard Johnson Martin, Manchester; Robert William Quennell, Brentwood; Edward Arthur Hardwicke, London; Arthur Hoper-Dixon, Upavon, Wiltshire.

ROYAL COLLEGE OF SURGEONS, EDINBURGH.—The following gentlemen passed their final examination for the qualification in Surgery at the sittings held in July 1884, and were admitted L.R.C.S. Ed.:—Alfred Leach, London; John Andrew Webb, Dublin; Edwin Alfred Bennett, Dublin; John Tingle Butterworth, Burninghame; William Knott, Oldham; James Edwin Cheyne Wilson, Devonport; William Frederick Abbott, Co. Cork; George Dall Orrock, M.B., C.M., L.D.S. Ed., Newington; Alfred James William Keenan, Edinburgh; Alexander Gordon, L.A.H.I., L.M., Dublin; Robert Alexander Lundie, M.A., M.B., Edinburgh; Percy Meredith Earle, Brentwood, Essex; James Bennet, Leith; Samuel Ebenezer Johnson, Sparkbrook.

WE have received Otago papers containing an account of the trial and conviction of Mr Loyd Davenport Parry, surgeon, for manslaughter, as also the report of a meeting of the Medical Association of the district, at which resolutions were passed sympathizing with Dr Parry, and expressing disapproval of the sentence and of the manner in which the trial was conducted. The circumstances were briefly these:—Dr Parry was called to a confinement. He told the nurse in attendance that there was a rupture of the uterus, and that he would try to deliver. On failing to accomplish this he telegraphed for assistance, and left the patient with the intention of returning to meet the gentleman for whom he had sent. Meanwhile the patient died. Somewhat incriminating evidence was given as to Dr Parry's condition under the circumstances. But, however blameworthy his conduct may have been, the evidence does not to our mind support the verdict. The trial followed three days on the death. The jury was selected from the immediate neighbourhood, and showed distinct signs of determination to punish Dr Parry.

WE have received a copy of the Rules and Programme for the Eighth Session of the International Medical Congress, which will be held from the 10th to the 16th of the present month in Copenhagen. The work of the Congress is divided into fourteen sections, viz: — Anatomy, Physiology, Pathology, Medicine, Surgery, Obstetrics, Ophthalmology, Pediatria, Dermatology and Syphilis, Psychiatria and Nervous Diseases, Laryngology, Otology, State Medicine, and Military Medicine. Six general addresses by Virchow, Pasteur, Sir W. Gull, Tommasi Crudeli, Verneuil, and Panum are announced, Sir W. Gull taking for his subject the International Collective Investigation of Disease. Among other communications advertised are "The Listerian Antiseptic Treatment in its present form," by Sir Joseph Lister; "Influence of Acute

s Diseases on the Kidneys," by Prof. Grainger Stewart ;
mon International Nomenclature in Obstetrics," by Prof.
mpson ; and "Dissection of the Organ of Hearing, with
r regard to its Pathological Changes," by Prof. Voltolini
Kirk Duncanson. The official languages are French,
, and English ; but other languages are allowed for short
, provided they can be translated into one of the official
es. Questions regarding the meetings, etc., should be
d to Prof. C. Lange, Secretary-General, 22 Kronprinses-
Copenhagen K.

AMES M'KENZIE DAVIDSON, M.B., C.M., with the assistance
ssor Alex. Ogston of Aberdeen, has invented and advertised
ancet a new instrument which is termed a "lithophone,"
to enable surgeons to hear a stone in the bladder. The
ent is a common sound so arranged at the handle as to
ne end of an elastic tube, the other end of which is
into the operator's ear. Prof. Ogston and Mr Davidson
ployed their "lithophone" in clinical teaching, and found
useful. But we think, notwithstanding all they say in
f their instrument, that the method long ago introduced
d by the late Mr Spence, of placing a thin, round, flat
n the handle of the sound, is better. By this method
ence of a stone in the bladder can be made distinctly
to the operator and to a number of bystanders at the
ime. Prof. Ogston recommends the "lithophone" as
and convenient. Mr Spence's sounding board is both
and more convenient. Prof. Ogston mentions a case in
he "lithophone" was useful in discovering a stone in
dder. The calculus, when subsequently caught in a
e, was found to be nearly half an inch in diameter.
mbly submit that such a calculus ought to have been
felt.

OBITUARY.

DR ALEXANDER TWEEDIE.

LEXANDER TWEEDIE died at his residence, Bute Lodge,
nham, May 30th, 1884, aged 90. He was born in Edinburgh
, and educated at the High School of that city. He com-
his medical studies at the University of Edinburgh in 1809,
he Royal Infirmary, where he was a fellow-pupil of the late
ert Liston with Mr Wishart, one of the surgeons. He took
ee of M.D. in 1815, and in 1817, after undergoing the usual
tions, became a Fellow of the Royal College of Surgeons
burgh. In 1819 he married, and in the following year
l to London, where he took a residence in Ely Place and
ced practice as a physician. Two years later Dr Tweedie
nitted a Licentiate of the Royal College of Physicians of

London. In 1824 he was appointed assistant physician to the Lon
Fever Hospital, and, on the resignation of Dr Armstrong, was elec
physician. In the same year Dr Southwood Smith became his
league, and they continued to be the attending physicians for nea
forty years. He was a voluminous writer and compiler, as his great w
the *Cyclopædia of Practical Medicine*, and the lesser one in *Librar*
Medicine testify. He was also a successful practitioner and a c
sulting physician, having worked in his chambers in Pall Mall
within a very few years. By his death another of the links to
past generations have been severed. Few of Robert Liston's
pupils now remain, and fewer still who graduated at the age
21, when Waterloo was being fought. He retained to the last
shrewdness and practical sense, which were his strong characte
istics, and was much interested in all the changes in practic
though he was conservative enough to believe that many we
not for the better.

IN MEMORIAM

WITHIN THIS URN LIE THE ASHES OF
SAMUEL DAVID GROSS,
A MASTER IN SURGERY.
His life, which neared the extreme limits of the Psalmist,
was one unbroken process of Laborious Years.
He filled Chairs in Four Medical Colleges in as many States of the Union,
and added Lustre to them all.
He recast Surgical Science as taught in North America,
Formulated anew its Principles,
Enlarged its Domain,
Added to its Art, and imparted fresh Impetus to its Study.
He composed many Books, and among them
A SYSTEM OF SURGERY
Which is read in different tongues, wherever the Healing Art is practised.
With a Great Intellect, carefully trained and balanced,
He aimed with undivided Zeal
At the Noble End of Lessening Human Suffering
And Lengthening Human Life,
And so rose to the Highest Position yet attained in Science
by any of His Countrymen.
Resolute in Truth, he had no Fear, yet he was
both Tolerant and Charitable.
Living in Enlightened Fellowship with all Labourers in the
World of Science,
He was greatly Honoured by the Learned in Foreign Lands
and deeply Loved at Home.

Behind the Veil of this Life there is a Mystery which He penetrated on the
SIXTH DAY OF MAY, 1884.
His Memory
Shall Exhort and His Example shall Encourage and Persuade
those who come after Him to Emulate Deeds
which, Great in Themselves,
Were all Crowned by the Milkwhite Flower of a
STAINLESS LIFE.

Part First.

ORIGINAL COMMUNICATIONS.

I.—THE AMBULANCE MOVEMENT IN SCOTLAND.

By JAMES WHITSON, M.D., F.F.P. and S.G., F.R.M.S., Glasgow.

IT is now rather more than two years since a movement was riginated in Glasgow for the establishment of a permanent nbulance service. Colonel Mactear was the first to bestow tention on the subject, and with characteristic enthusiasm was xious that such an association—though at first confined to the y and its immediate vicinity—should gradually extend its a of usefulness throughout the whole of Scotland. The cessity for a provision of this kind had long been felt, but th that apathy which weds us to established customs, and inclines us to depart from the recognised order of things, thing was ever done towards supplying the want. Even up a recent period there are few surgeons of experience who not recall cases in which the severity of an injury has been iously aggravated by the absence of skilled assistance, and the want of what is equally essential in the treatment of idents at the time of their occurrence,—a proper means of nsporting the wounded either to their own homes or the rest hospital. It is well known, for example, to all who conversant with the matter, that simple fractures have in h these ways been frequently made compound, and where ge arteries have undergone severance or laceration, lives have many instances been lost, owing to ignorance in regard to the ans usually adopted for arresting the flow of blood. In shipilding and engineering yards the operatives engaged there are nstantly getting hurt, and intolerable agony was often endured, consequence of the delay which usually took place in obtaing surgical aid; while a subsequent journey to the Infirmary in a hicle, entirely unsuited for the purpose, was a trial of fortitude m which the strongest would speedily recoil. But notwithnding the fact that all this was patent to the profession, and the great bulk of the community, it was not till the spring of 82 that the Association—now known as the St Andrew's mbulance Association—was formed, the aim of its promoters being to impart amongst its members a knowledge of what is termed, "First Aid to the Injured," so that wounded or disabled individuals might be at once relieved from suffering, and made as comfortable as circumstances would permit till the arrival of a medical man. This was certainly a great step forward, and as far as it went nothing could be better; but the fact was apparent that if such tuition was to be of thorough utility, it would require to be supplemented by an efficient transport service, for the proper removal of patients is of the highest importance, and demands the utmost gentleness and skill in its execution.[1]

In order to carry out the first of these projects, classes were formed in different parts of the city with the view of affording instruction in ambulance work, and, under charge of lecturers appointed by the Association, were thrown open to all on payment of a small entrance fee. To ensure a good attendance, the large employers of labour were asked to co-operate by sending a few of the more intelligent of their men to receive a practical course of training in the treatment of the various accidents likely to happen in connexion with the pursuit of their several industries, and it is pleasing to add that an immediate and hearty response was given to this appeal. The pupils, who speedily numbered more than five hundred,[2] were invariably found to evince a deep interest in the subject, and a desire to be of use afterwards, which was deserving of every encouragement. In this way an ambulance squad was soon ready to assume duty in the principal shipbuilding yards and foundries, and by its aid casualties of all descriptions are now promptly dealt with, and in a more enlightened and humane way than they used to be. To prevent the existence of popular misconceptions regarding the objects and scope of the Association, care was taken by the teachers to impress upon the members of their classes that their future services were by no means intended to supersede those of the legally qualified practitioner, or, indeed, trespass upon his province in any degree. On the contrary, it was made perfectly clear to them that the action of ambulance men in cases of injury was to be confined to the relief of the more pressing symptoms, and to the placing of the patient as much as possible at his ease until the assistance of a surgeon could be procured.

The next step which the Association took was the purchasing of an ambulance waggon of the Howard pattern.[3] This has proved invaluable, and been greatly appreciated by those who have used it, though scarcely taken advantage of to the extent that it might be. It may be stated, for the benefit of those who have not seen the carriage in question, that three patients can be accommodated in it at one time. On its off side there is a sliding bed which comes out easily, and when loaded[1] may be slipped in again without causing any inconvenience to the person placed upon it. On the near side a stretcher can be fixed at the same level on hooks fitted up for the purpose, and, if required, there is room for suspending an additional one above. A second waggon of similar construction was recently presented to the Association by Colonel Mactear and the officers and members of the 5th L.R.V. A third, somewhat larger, and with a number of improvements, has just been supplied to the Coatbridge Branch of the Association by Mr Holmes of Irvine, and, through the kindness of that gentleman in supplying me with photographs, I am now enabled to give woodcuts of it.[2]

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[1] Patients who are conveyed to hospital in ambulance waggons are invariably found to be fresher, and in better condition than those who are brought in carts or cabs.

[2] During 1883 a large number of men passed the required examination, and it is certain that the records of the present year will show an increase on either of its predecessors.

[3] The price of this waggon was £65.

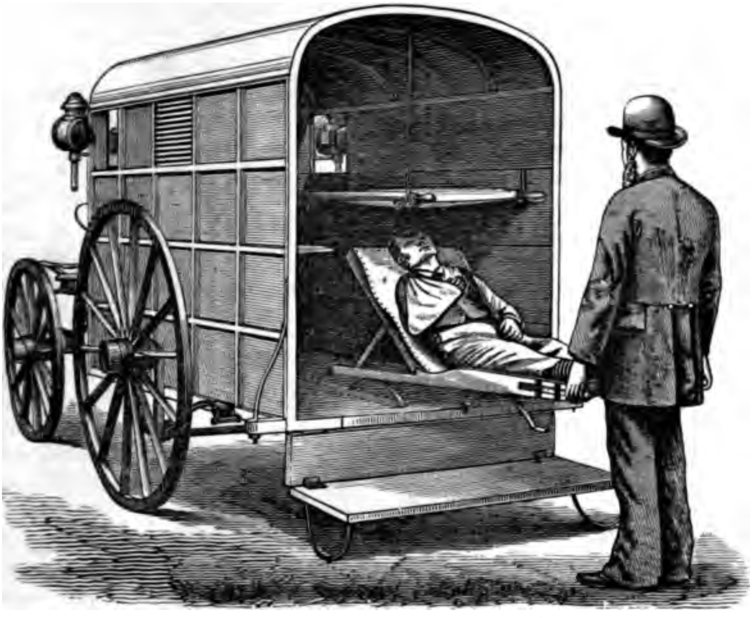

FIG 1.—Waggon of Coatbridge Ambulance Association.

To reduce friction the machine is supplied with Armstrong's single plate springs, and in order to promote steadiness of movement and lessen vibration the floor of the van is placed about eighteen inches above the ground. Two sliding beds[3] are arranged on it, and in cases of emergency there is ample room for attaching a couple of stretchers above. A door is provided in front (see Fig. 2), so that the attendant can take his seat by the heads of the sufferers without incommoding them. The height of the wheels lessens the draught, and hickory and steel have been freely us with the view of combining lightness and strength.

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[1] A stretcher is said to be "loaded" when the patient is placed upon it, and "unloaded" when he is lifted off it.

[2] My best thanks are also due to the executive committee of the Coatbridge Branch of the Association for their kind permission to publish these. The cost of this waggon was £60.

[3] These beds are supplied with springs.

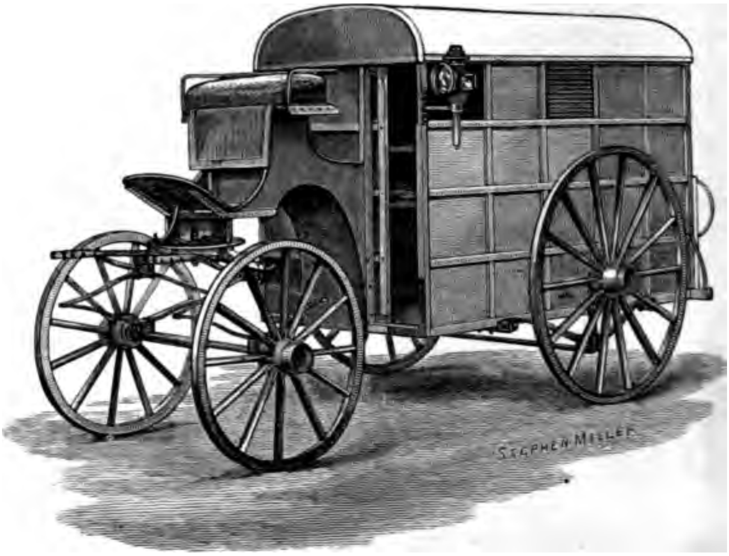

FIG. 2.—Waggon of Coatbridge Ambulance Association.

Messrs Atkinson and Philipson, the well-known coach builde of Newcastle-on-Tyne, have recently produced an excellent ambu lance carriage[2] (see Fig. 3), and the stretcher (Fig. 4) whic accompanies it is easily managed. Both have been constantl in demand since they were placed at the service of the public.

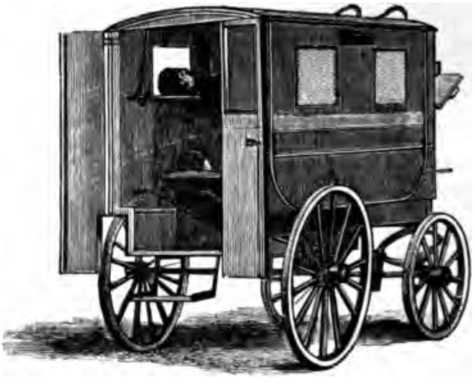

FIG. 3.—Messrs Atkinson and Philipson's Waggon, used in Newcastle-on-Tyne.

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[1] The height of the front wheels is 3 feet 6 inches, that of the hind on amounts to 4 feet 8 inches.

[2] I have to return my best thanks to Messrs Atkinson and Philipson fo kindly supplying me with woodcuts of the waggon and stretcher designed by them.

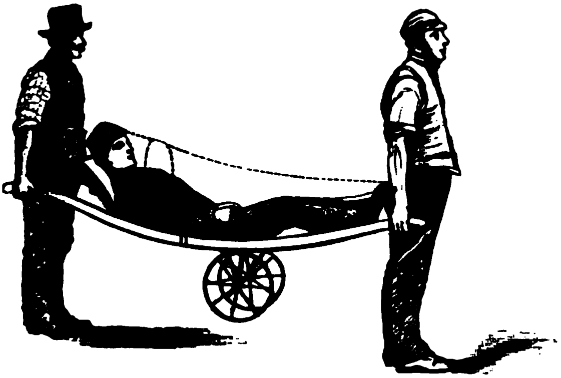

FIG. 4.—Messrs Atkinson and Philipson's Stretcher, used in Newcastle-on-Tyne.

Fig. 5 represents the first waggon used by the St John's mbulance Association in London. Though a great improve-ent on the cab, the height of this vehicle must ever remain n insuperable objection to its use, and the safe depositing and ithdrawal of patients at such an elevation can be no easy matter.

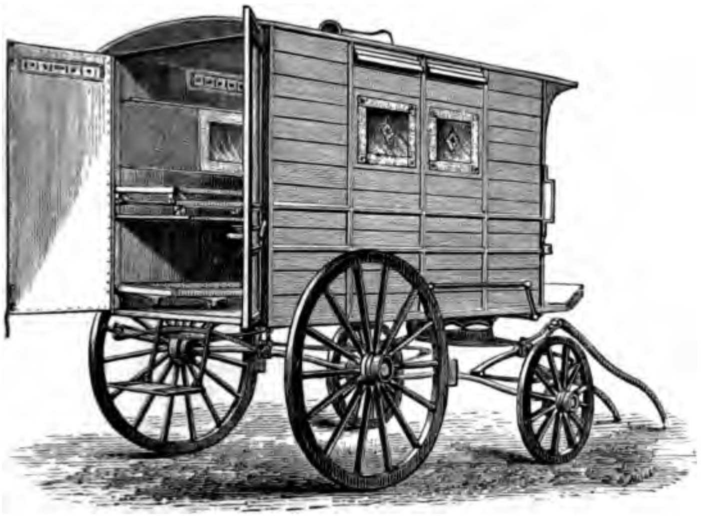

FIG. 5.—First Waggon of St John's Ambulance Association, London.

By way of illustrating the advantages which such training and uch means of conveyance confer, let us take the case of a man ho has received a fracture of the leg in any of the large works hich are scattered throughout the city or its neighbourhood. ill quite recently no attempt was made to put up the injured mb, as splints were not kept in store, and it was improbable that ny fellow-labourer possessed the requisite knowledge for extemporizing such things.[1] Unless, therefore, a medical man happened to be on the spot, the patient was allowed to lie in any way that he chose till professional aid could be summoned,—a state of matters causing much needless pain, and which a little previous training would have averted. This was a trifle, however, in comparison to what the unfortunate sufferer was compelled to submit to during the drive homewards, while the getting of him in and out of a cab was a species of torture of which words fail to convey the slightest idea.[2] Now, however, the waggons of the Association are sent free of charge to any point within the municipal boundaries of Glasgow on notice to that effect being sent to the secretary.[3] In doing so, it is usual to notify particulars of the nature and extent of the disaster which has occurred, and when this precaution is attended to, everything likely to prove useful can be provided. If, for example, a telegram[4] has been received requesting the removal of half a dozen men who have been injured, the official in charge at once telephones to Messrs Wylie & Lochhead[5] to send both waggons to head-quarters. During the interval which precedes their arrival, the officers prepare themselves for the journey, and select the necessary material,[6] the whole time occupied in the carrying out of this order being, as a rule, under six minutes. Should there happen to be an ambulance squad at the scene of accident, the attendants, on reaching their destination, will probably find the broken limbs have been set, any bleeding arrested, and every burn or cut dressed,—all that they require to do being to remove the patients. If not—and such occasions are fortunately now rare—remedial measures are at once adopted, and the wounded men borne to the couches and

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[1] Ambulance pupils are always instructed in regard to the different ways of extemporizing splints.

[2] Cabs were almost invariably used for the transportation of the wounded. Occasionally people who had sustained injuries in the country were brought to town in carts, and though these vehicles permitted the patient to lie at full length, yet the jolting which the absence of springs necessarily entails must often have proved intolerable.

[3] The waggons are only available in cases of accident, and patients suffering from infectious diseases are not conveyed in them. The head-quarters of the Association are situated at 93 West Regent Street, and two attendants are always on duty, and ready to attend to cases by night as well as by day.

[4] By the kind permission of Mr Hobson, postmaster, priority of delivery has been secured for telegrams addressed "Ambulance," Glasgow, and at a recent meeting of the Town Council it was enacted that way must be made on the streets for the waggons belonging to the Association. The Clyde Trust have also granted them a free passage at their ferries.

[5] Under existing arrangements Messrs Wylie and Lochhead undertake the storage and horsing of the waggons, and the best thanks of the Association are certainly due to that firm for the admirable manner in which they have fulfilled their contract.

[6] The box of the Association is always taken in journeys of this description. It contains several sets of splints, a number of triangular bandages, tourniquets, pins, carbolic oil, and one or two other requisites useful in cases of accident. The original box of the Association was designed by Col. Mactear, and is supplied at a moderate cost at the office of the Association.

ggons continue to be of great service, not only in the
rtation of the wounded, but in the removal of the aged
irm. One of the most pleasing features observable in
on with it is the fact that branches have been formed in
nportant centres as Edinburgh and Coatbridge. In the
these a number of classes were recently organized, and
hundreds of pupils enrolled; while in the second, as well
hettleston, Thornliebank, and Alloa, successful courses of
ion have been delivered. Notwithstanding the invaluable
of the services which this excellent Society renders, it is to
etted that, financially, its affairs are not in the prosperous
n which could be desired; but as its merits are brought
rominently forward, and as the amount of work it is
tatiously doing comes to be better known, there will, let
, be no lack of funds for its maintenance. Of the value of
nce training, more especially in large industrial centres, it
ess to speak; and there is abundance of testimony to prove
spread of knowledge in this way has already been the means
ating much suffering, and on more than one occasion of avert-
iplications which must otherwise have led to loss of life.[2]
onclusion, I need scarcely add that any extension of the
ent will be eagerly welcomed by the parent Association, and
nformation regarding the formation of classes will be gladly
l by the secretary, Mr W. M. Cunningham.

HE INFLUENCE OF ACUTE OTITIS MEDIA ON THE RESPIRATION.

regarding the diagnosis, I have ventured to publish this case in the hope that by so doing I may in some way help to relieve that anxiety and give a clue to diagnosis. A few years ago, while acting as a resident in the Edinburgh Infirmary, a patient, Jane B., æt. 20, suffering from gastric ulcer and anæmia, was admitted to the wards of which I had charge. Her temperature and pulse were normal, her respirations 20 per minute. The treatment employed was perfect rest to the stomach, injections of beef-tea, eggs, and brandy being given per rectum; under this treatment she improved rapidly. A fortnight after her admission, however, an increase of the respirations was noticed, an increase quite disproportionate to the slight increase of the pulse. Hitherto the respirations had been from 20 to 24, now, however, they rose to 36 per minute. The temperature was perfectly normal, the pulse 72. No pain was complained of, nor was cough present. A careful examination of the throat, chest, and abdomen failed to reveal any cause for this increase. The number of the respirations continued high without any rise of the temperature or pulse until the third day, when the morning temperature was found to be 101°, the pulse 78, the respirations 36. In the evening, the temperature was 101°·8, pulse 84, respirations 40. Next day the temperature was still slightly elevated,—in the morning it recorded 100°, in the evening 101°. Pulse, morning 76, evening 88. Respirations, morning 40, evening 38. A careful examination was made by Dr Brakenridge, but nothing to explain the condition could be discovered. The temperature for the next six days was normal in the mornings, 99°·2 in the evenings, the pulse during this time varying from 64 to 80, the respirations from 36 to 48, the latter point being gained on the evening of the sixth day. Two hours after my evening visit on this day I was asked to see this patient again, as she was complaining of great pain in her right ear. This she stated had come on suddenly, and almost immediately afterwards she felt some discharge from the meatus. On inspection, the meatus was found full of pus, free from any disagreeable smell. Pressure on the ear increased the pain. Poultices, upon which some Tinct. opii had been sprinkled, were applied, but these had little effect in relieving her. Next morning the discharge from the ear was free, the pain less severe. The temperature in the morning was 100°, the pulse 92, the respirations 56. Evening temperature 101°·2, pulse 88, respirations 50. She was unable to hear a watch placed on the right ear. Without giving a daily record of temperature, pulse, etc., which might prove tedious, I may state that for three days the temperature remained close on 100°. The pulse which, prior to the respiratory increase, had never exceeded 70, steadily increased after this began, gaining on the evening of the perforation 88, and on the morning subsequent 92. It then gradually decreased, the normal rate being regained on the fifth day. The respirations, unlike the temperature and pulse, did not immediately begin to diminish in frequency after the perforation. For some days they continued 52 per minute, on the sixth and seventh days they reached 60—this with a pulse of 72 and a normal temperature. Steadily and gradually they now diminished; on the ninth day the record was 48 in the morning, 46 in the evening; on the eleventh day, 40 both morning and evening. During the remainder of her stay the diminution continued, and when, a week later, she was discharged, they had reached 32 per minute. At the time of her leaving the hospital she was able to hear a watch at 6 inches' distance, a feat which I think we must consider gratifying, seeing that for nearly ten days after the discharge appeared she was quite unable to hear a watch placed on the ear.

In connexion with this case there are one or two points which to me seem to merit special attention. The entire absence of pain, throbbing, and distressing noises in the ear during an attack of acute otitis is not of common occurrence. With regard to pain, so far as my own observation goes, and from what one can gather by a perusal of the symptoms described as being generally present in these cases, its absence seems an unusual circumstance. It has, however, been noted before. Von Troltsch,[1] in his book on *Diseases of the Ear*, in speaking of acute suppurative catarrh of the middle ear, says, "Cases occur, however, here and there, in which such abscesses in the tympanum lead to perforation of the membrane without any pain." The absence of the other symptoms is, so far as I can learn, even more unusual. Unfortunately, the acuteness of hearing was not tested. The patient evidently did not observe, or at least did not complain of any deafness, nor could I detect any inability on her part to understand what was said to her. Urbantschitsch,[2] referring to this point, says, "Even well-marked deafness on one side can develop itself without its being discovered, unless care and tests be employed. Frequently it is only found out by an accidental stoppage of the external meatus of the other side, or by the patient lying on the sound side." He also says that patients who are extremely deaf on one side, but whose other ear remains normal, only find out their defect when cerumen having filled the meatus of the sound side they are rendered so far completely deaf. On removing the cerumen from this side, the patients express themselves as having regained their hearing perfectly.

To my mind the causation of the otitis is somewhat doubtful. The bed in which the patient lay was placed near a window; the weather at the time was cold. She may have been exposed to a draught, but of this neither she nor any subsequent occupant of the bed ever complained. There is, however, another, and though it may seem a doubtful mode of origin, still, with the knowledge which recent experiments have given us, I cannot regard it as an altogether improbable one. Gellé and Wiet[3] have observed as a result of stretching both vagi in a kitten, which they killed five days after the operation, well-marked otitis media suppurativa of both ears. In the left ear the abscess had not yet perforated the tympanic membrane; in the right, however, this had occurred, congestion of the internal ear on this side being also present. The authors regard this as the result of a reflex action, the afferent nerve of which is the vagus, the nuclei of the medulla the centre, the sympathetic the efferent nerve. Again, among the symptoms usually observed when a foreign body is lodged in the external auditory meatus is vomiting. This undoubtedly is the result of a reflex, the efferent nerve of which is the vagus. With these facts before us, is it too bold to suppose an irritation of the peripheral fibres of the vagus distributed on the stomach capable of producing such an abscess? I am inclined to consider it as a probable explanation of its causation.

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[1] English Edition, p. 56.

[2] *Ohrenheilkunde*, p. 325.

[3] "Lésions de l'oreille interne et de l'oreille moyenne à la suite de l'élongation du pneumogastrique."—*Gaz des Hôp.*, 1881.

How can an otitis media give rise to increase of respiration? Some may regard the dyspnœa as a hysterical symptom, but against this there are various and to my mind insuperable objections. In the first place, the patient showed no other hysterical sign; the condition was only discovered by a careful watch having been kept on the temperature, pulse, and respirations. No remarks were ever made in the patient's hearing suggestive of any abnormality, and I should fully expect, and I think the history of hysterical cases bears me out in this, that had hysteria been the cause, there would have been marked variation in the rate of the respirations. This was not so. Once the rise in respiration had begun, it continued steadily to increase, until some days after the perforation, when a rate of 60 per minute was recorded. Afterwards a steady and gradual decrease set in; but even at the time of her discharge from hospital, when surely it is improbable she would have continued the deceit, the respirations had not nearly regained their normal rate. Some appreciable increase of the pulse-rate might also fairly be expected in one making such a continuous effort—for seeing the patient, as I did, several times daily without perceiving marked alteration in the rate of respiration, we must look upon it as a continuous effort. Such was not the case, however. With respirations numbering 60, she had a pulse of 72, and with respirations 36, she had a pulse of 76 the day before her discharge. Foster in his *Physiology*, page 338, states "that of all the aphyschical nervous centres, the respiratory centre is the one which is most frequently and most deeply affected by nervous influences from various quarters." According to Langendorff, weak stimulation of any sensory nerve produces acceleration; strong stimulation, inhibition, or slowing of respiration. From this I suppose the sensory nerves of the ear are not excluded. But by what nerve is the impulse conveyed? Whether is it through Jacobson's nerve (a branch of the glosso-pharyngeal) or through the branches of the fifth distributed to the tympanum? Both are nerves of sensation, both take part in the formation of the tympanic plexus, and are therefore equally exposed to the irritation. Some observations made by Urbantschitsch on a patient suffering from purulent tympanic inflammation, with perforation of the membrane, and the presence of polypi in the cavity, are interesting in connexion with this point. He states that "by pressing with a sound at one spot near to the upper posterior periphery of the perforated[1] membrane, a severe burning and an intensely acid taste was complained of at the tip of the tongue, but when the sound was pressed against the inner wall of the tympanum, in the region of the plexus, a sensation of scratching was felt in the posterior pharyngeal wall. It was therefore possible in this case to act on parts supplied by the trigeminal, through the chorda tympani, on parts supplied by the glosso-pharyngeal through the tympanic plexus." From this instance it would seem that irritations applied to the plexus are more readily conveyed by the glosso-pharyngeal than by the trigeminal branches. That the trigeminal can be the afferent nerve in many reflex actions originating in the ear is well shown by, among other examples, the complete cure of supra-orbital neuralgia, after tenotomy of the tensor tympani in patients suffering from chronic catarrh of the middle ear. Before we can accept the idea that irritation of the plexus is better conveyed by the glosso-pharyngeal than by the trigeminal we must, I think, have further observations. Sources of error are apt to arise in observations of this kind. The sound may press upon fibres containing a greater number of glosso-pharyngeal filaments, or the fibres of the fifth may have been somewhat damaged by the inflammatory action. Those seem to me the most obvious errors which may occur, but there are many others which would require careful consideration. The glosso-pharyngeal is closely related to the vagus, the nerve of all others most likely to convey impulses to the respiratory centre. When the peripheral fibres of the auricular branch of the vagus are irritated coughing is induced, and taking this into consideration along with Urbantschitsch's result, imperfect though it may seem, I think we must consider the glosso-pharyngeal, of the two nerves, the more likely to convey the impulse. The question may be asked, Could the auditory nerve not form the afferent channel? Nerves of special sense can, we know, act as afferent nerves in reflexes, for when the eye is exposed to a strong light sneezing frequently results. The afferent nerve in this case is the optic. In the case under consideration, however, we have the fact that though the increase came on in what we must regard as an early stage of the otitis, and though it increased steadily until the abscess burst, it did not reach its highest level until some days subsequently. The removal of the pressure by the bursting of the abscess was not followed by a diminution in the rate of respiration, which, had the auditory been the conveyor, must necessarily have followed. The absence of auditory vertigo also reads against this theory. Benedikt, quoted by Urbantschitsch, states that from the sensory nerves of the tympanum a reflex action on the circulation of the brain, particularly on that of the medulla, occurs. In this way, doubtless, many of the cases of epilepsy and of hyperæsthesia, dependent on ear disease, can be explained, but in the absence of signs pointing to involvement of the vomiting, cardio-inhibitory, and other centres, we cannot regard this as a likely cause of the phenomena in this case.

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[1] *Ohrenheilkunde*, p. 414.

To Dr Brakenridge I tender my sincere thanks for his kindness in allowing me to publish this case.

III.—EXTREME CYSTIC DILATATION OF THE FALLOPIAN TUBES; ABDOMINAL SECTION; RECOVERY.

By J. MILNE CHAPMAN.

(*Read before the Edinburgh Obstetrical Society, 16th July* 1884.)

THE patient, to whose case I am about to refer, is 30 years of age, is single, and has never menstruated. At the age of 7 she had quartan ague, which lasted over two years, and yielded on her changing her place of abode. At 14 she had typhus fever, and was ill 5 months. Always as a child she was breathless on slight exertion, and never enjoyed, even averagely, good health. At the age of 20 she had an attack of pericarditis, and subsequently remained very anæmic.

At about 22 she first experienced pain in the lower part of the abdomen and groins. This got gradually worse, but did not interfere with her occupation as a seamstress till she was aged 24. Since that time the pain has so aggravated as to prevent all attempts at work. About this time swelling of the abdomen occurred. She consulted a medical man, who recognised the existence of "two large fluctuating tumours at the sides of the womb." General treatment for her anæmic condition was ordered. From this time onwards she had occasional attacks of sickness. Six months later, *i.e.*, five years ago, the right side tumour was tapped per vaginam, and 15 ounces of fluid removed. After the tapping she had a severe feverish attack, which prevented any further interference being attempted. When she recovered from this, 7 weeks later, her condition was such that further tapping was deemed inadvisable. For six months after this she was treated constitutionally, but at the end of that time she was advised, considering her general feeble state of health, that no local treatment would be attempted. Three and a half years ago I first saw her when she consulted Dr Angus Macdonald at the Infirmary. She then told us that since the tapping the pain had become much worse, and from her description of it and of her feverish illness it would appear that subsequent to the tapping a condition of pelvic peritonitis had been set up, especially on the

le. On examination, a cystic tumour about the size of a
st was found, occupying the pelvis to the left and in
the uterus. In the end of February 1881 this was tapped
ginam, and 18 ounces of blood-stained serum drawn off,
hich physical examination revealed an almost normal
ship of the parts except the presence of some stringy
s around the uterus. The patient experienced some
ut on 29th April a fresh tapping became necessary, on
of reaccumulation of the fluid and a return of symptoms.
occasion five ounces of yellow, albuminous, neutral fluid
cific gravity of 1030 was removed. This again, however,
ve temporary relief, but the patient did not come under
tion until the following September, when I again tapped.
ping was followed by most violent reaction, the patient's
ture rising to 104° and 105°, and this condition lasted
uninterruptedly for two years. During this time her
ture averaged 102° or 103°, occasionally was 105° and 106°,
a few occasions it fell to normal, and remained so for three
days. On more than one of these occasions the patient
d her conviction that something had given way internally,
e I was able to verify this by finding on examination that
had collapsed. I have little doubt, therefore, that during
wo years repeated ruptures into the abdominal cavity
l, and repeated attacks of pelvic peritonitis. The high
ture I believe to have been due to tension in the cysts,
this opinion I am confirmed by the fact that no other
ould be discovered, though such was searched for re-
and carefully, both by myself and by others.

atient's condition in the end of September 1883 was as
—She was completely confined to bed, and suffered from
pelvic pain, which necessitated the habitual employment
tics. The temperature ranged between 101° and 105°;
e averaged 110, and there was a loud systolic murmur
in all the cardiac areas, most markedly in the pulmonary.
ere constant attacks of vomiting, and the condition was
eneral prostration. The abdomen was tense, swollen, and
tic on percussion. On vaginal examination the uterus
nd partially retroverted and pushed downwards and to
t side by a tense elastic tumour, which completely filled
pelvis. This tumour came lowest down on the left side,
pper limit could only be indefinitely felt about the level
pelvic brim, owing to the presence of great abdominal
m. It was impossible to move either uterus or tumour.
ent urgently pressed for operation when the chance of its
nce was offered her. I was influenced in suggesting
nce from a perusal of Mr Lawson Tait's recent writings
ro-Salpynx, and of the record of his marvellous success
rformance of the operation which so justly bears his name.

I resolved, therefore, to make an exploratory abdominal incision, without, however, being much encouraged either by my own hopes or by the advice of my professional friends. The prospects of the operation were fully explained to the patient, and she unhesitatingly demanded its performance, saying that she would prefer even a certain death to a continuance of her then condition.

Accordingly, on 13th October 1883, assisted by Dr James Bennet, I proceeded to operate. The patient's temperature at that time was 101½°; two nights previously it had been 105°. Dr Playfair kindly undertook the arduous duty of administering chloroform. No spray was used, but hands, instruments, and sponges were moistened in a 1 to 50 carbolic acid solution.

On opening the abdomen the omentum was found adherent to the parietal peritoneum, and also, along with coils of small intestine, to a cystic mass which was firmly wedged into and filled the brim of the true pelvis. On freeing the adhesions to this surface, the mass was found to consist of two lateral cysts completely adherent together, and to the walls of the pelvis all round. The left side was first dealt with—small Chinese silk or catgut being used, according to the size of the bands. The ligatures were passed by means of an aneurism needle, which was forced through the adhesions—these being almost universal. The connexions between the tumour and bladder and front wall of the pelvis were first secured and divided; then those between the back and the rectum. There still remained a strong band of connexion between the side of the tumour and the side wall of the pelvis running down by the edge of the rectum, close to the ilio-sacral synchondrosis, and across the floor of the pelvis to the side wall of the uterus, at about the junction of the body and cervix. This I took to be the outer edge of the broad ligament. It was secured in several pieces, and on reaching the wall of the uterus the connexion between the tumour and the uterus was similarly dealt with, until a firm pedicle, of about the thickness of the little finger, passing to the upper angle of the uterus was isolated. This was transfixed and tied in the Staffordshire knot with stout silk. The tumour on the other side was similarly attached, and presented no less difficulty in its secural. The two tumours were then removed.

There was considerable hæmorrhage from the cut surfaces on the left side. Some bleeding points were secured in ligatures, and I then used to check oozing a method which I should not be inclined to repeat—consisting in swabbing over of the surface with a piece of lint steeped in styptic colloid. A glass drainage tube was inserted into Douglas's pouch, and the abdominal wound closed. A brandy enema was administered, and the patient put to bed.

The operation lasted two hours and fifteen minutes, most of which time was consumed in dealing with the tumours, as the opening and closing of the abdomen only took about twenty minutes.

The patient rallied rather slowly. During the next six hours about an ounce and a half of blood escaped through the tube; in the next twenty-four hours about an ounce of bloody serum; thereafter there was only slight staining of the dressing, and the tube was removed on the third day. For the first three days the temperature was irregular, as it had been before the operation. It then remained normal for three days, when it again rose coincident with the development of an inflammatory swelling in the region of the bed of the left tumour. This ultimately suppurated, and the pus found its way both through the lower angle of the wound and the wall of the bladder. Through the bladder there were discharged some of the silk ligatures. In a month the abdominal wound entirely closed. Convalescence was further delayed by the development three months later of a similar mass on the right side, which, however, has become gradually absorbed.

The patient is now freely moving about, has a normal temperature, and is quite relieved of the suffering which has rendered her life miserable for the last six years.

The mass removed from the left side consisted of two cysts, one of which contained twelve ounces, and the other about four, of a dark, amber-coloured, neutral, highly albuminous fluid of a specific gravity 1025, in which no characteristic cells could be detected. These two cysts were closely welded together, and the pedicle, which was about an inch in length, sprang from their point of junction. Passing over the outer surface of the outer or larger cyst there was an irregular torn or cut surface, commencing at the pedicle, and measuring 3 inches in length, and from $\frac{1}{2}$ to 1 in breadth. The remainder of the outer surface was covered by epithelium, but over it there were numerous attached fibrous bands—the remains of adhesions. Under the epithelial surface there were a few small cysts about the size of a pea. The interior of the larger cyst was uniform and smooth, dotted here and there with extravasations, and projecting under the surface were a few small cysts. On the interior of the smaller cyst there were several projecting bands, numerous extravasations, but no cysts. The walls of the cysts varied in thickness, from a quarter of an inch to that of a sheet of paper. The right side mass consisted of a single cyst, and presented the same characters. It had thinner walls and was smaller, being about the size of a peach. Portions of the cyst wall and pedicle were examined microscopically, but he detailed results I shall in the meantime reserve, as I hope to e able subsequently to report histologically upon this and three milar cases. I have no doubt, however, from the examination, oth macroscopic and microscopic, of the structures removed, that hey consisted of the dilated Fallopian tubes, which would appear have bulged downwards, and to have opened out the whole of he broad ligaments as they became distended. From the history f the case I am inclined to think that the closure of the tubes was either congenital, or occurred as a result of her ague or typhus fever during childhood.

IV.—THE EARLY STAGES OF TUBERCULOSIS.

By G. A. GIBSON, M.D., D.Sc., F.R.S.E., Lecturer on Materia Medica and Therapeutics, and Tutor in Clinical Medicine in the Edinburgh Medical School.

(Read before the Medico-Chirurgical Society of Edinburgh, 2nd July 1884.)

As the aim of this paper is limited to the study of some of the clinical aspects of commencing consumption, it does not of necessity concern itself with the consideration of pathological doctrines. It would nevertheless be at once matter of interest and profit to cast a brief glance, did time permit, upon some of the various phases of opinion held by those who have gone before us. The definition of tubercle by Morton, which formed the dawn of a new era; the careful researches of Baillie, leading him to the belief that there were two forms of phthisis, tubercular and non-tubercular; the wide generalization of a tubercular diathesis by Bayle, who, however, went astray in one direction, and paved the way for the opinion that there could be but one form of phthisis,—a doctrine supported by the overwhelming authority of Laennec, and accepted throughout Europe by almost every prominent writer, save Autenrieth, Schönlein, and Addison; the return to the dualistic views of Baillie and Vetter, effected mainly by the master mind of Graves, under whose guidance the unitarian dogma tottered to its fall; the more recent developments, foreshadowed by the brilliant induction by Villemin of the communicability of tuberculosis, and culminating in the achievements of Koch,—these and many other modes of thought might usefully engage our attention were they within the sphere of this communication.

For us, as practical physicians, however, it is impossible to pass over the modern change of opinion as to the prognosis in consumption—the phase of hopefulness, if such a term may be given to it. This paper does not touch upon pulmonary phthisis, commonly so called, and nothing can be said about the useful work of Rogée, and many others who led the way to the now universal belief in the frequent cure of wasting lung disease. But with regard to tuberculosis, with which we are now concerned, it must be remembered that Lebert has been instrumental in modifying the hopeless outlook which was, until twenty years ago, the only prognosis given in such cases. He narrated the appearances found in four autopsies of persons who had died of other diseases, and who presented absolute evidence of cured disseminated miliary tuberculosis, and described two other cases, whose symptoms were undoubtedly tubercular, in which the disease was cured in his own hands. Since the date of his publication, well-nigh twenty years ago, many others have corroborated his statements in this country, especially M'Call Anderson, so that we are justified in giving a less gloomy, if still grave, prognosis in cases of tuberculosis.

This paper is prompted by a case which has recently been under my observation, and which seems to support the more hopeful views of our own times.

On the 24th February of the present year a gentleman, belonging to a seaport town in the north of England, came to consult me, complaining of a feeling of lassitude and feverishness, with copious perspirations every night.

History of Present Attack.—The first symptom was noticed early in January, and this was nightly perspiration. In the beginning of February a feeling of fatigue and lassitude began, which culminated about the middle of the month in extreme depression. At the same time he observed a loss of flesh. He consulted his medical attendant, who found the temperature 104° Fahr., and gave him medicine, which produced frightful purgation—I use the patient's own words—but lowered the temperature, and checked the perspiration, at the same time causing anorexia. When it was done the appetite returned, but the perspiration also recurred with the high temperature. He struggled on for a week or two, and then came to Edinburgh.

The previous history is on the whole satisfactory, but there is one fact which may have some bearing on the subject of this communication,—this being that for a good many years he has suffered every June and July from hay-asthma. With this exception he has had no illness, save the usual children's ailments.

The social history is in every way good, unless the life of a practical chemist is to be regarded as unhealthy. My patient has prosecuted some inquiries in this direction without finding any fact pointing to such a conclusion. For eleven years he has been in various laboratories connected with manufacturing chemists, chiefly makers of artificial manures. Perhaps our President will kindly inform us if he has in the course of his experience met with any instances in which such an employment has been prejudicial to health.

Family History.—The patient's father is a strong man of middle size, aged 64, who has enjoyed very excellent health until the last two or three years, during which he has suffered from bronchitis in winter. His mother, aged 64, has been a very active woman, but is now subject to some affection, said to be connected with the heart. There are two brothers, aged 34 and 27, the elder of whom is troubled with sore throat, and the younger has not been very strong since an attack of diphtheria with a severe relapse, and subsequent paralysis. The patient has three sisters, aged 36, 31, and 23. The eldest has never been troubled by any ailment, and the youngest has also been at all times in good health, but the second had a fall in childhood over the bannisters, and is in somewhat delicate health, with a tendency to convulsive seizures. There have been no deaths in the family, which, although not robust, has certainly no apparent hereditary taint.

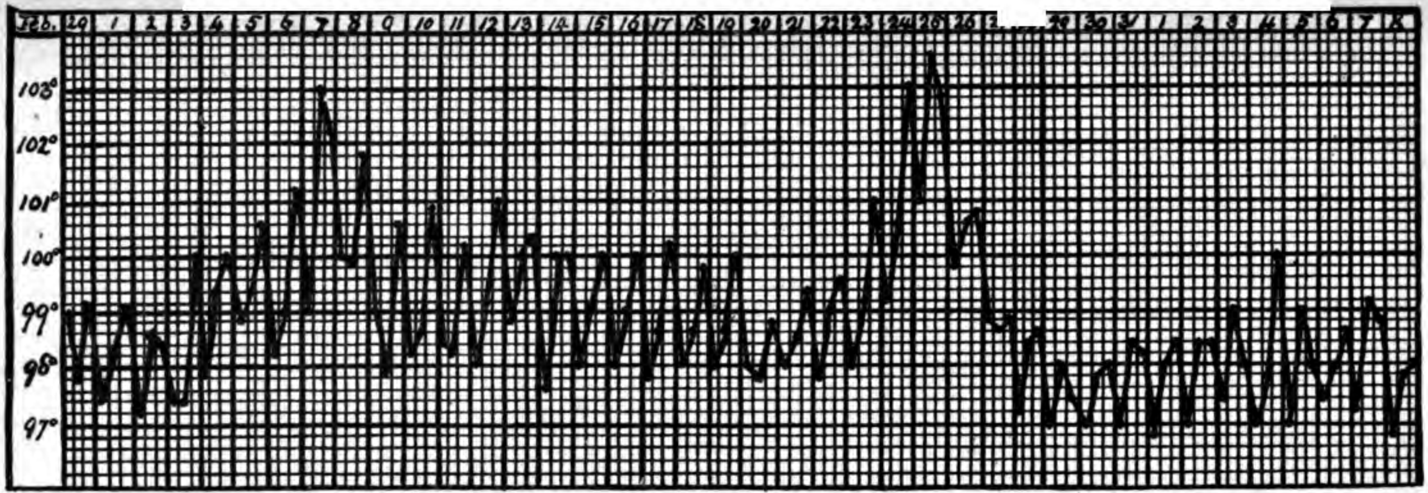
Condition when first seen.—Age 29; height 5 feet 7½ inches; weight about 9 stone—with fair complexion, gray eyes, and light brown hair. The face was rather thin, the bony prominences being unduly distinct, and the cheeks pale, with a bright spot on each side. The lips, gums, and palpebral conjunctivæ slightly blanched, and the sclerotic somewhat more than usually transparent. The tongue was flabby, and indented by the teeth, with a moist creamy fur behind. The skin was damp, and the muscles soft. The temperature was 102° Fahr. in the axilla. Of the pulse there is no note. On inspecting the thorax its form was seen to be normal, and its movements free. The blue tint of the veins could be seen through the skin more clearly than usual. There was no increase of the vocal fremitus to be found on palpation of either side. On percussion, however, there was a slight change in the note in the infra-clavicular area of the right side. There was no definite change in the pitch, but it was muffled as compared with the left side. On auscultation the breath sounds over the upper part of the right lung were found to be harsher than over the corresponding part of the left, and in the infra-clavicular and supra-spinous areas there was faint fine crepitation. There was not the least increase of the vocal resonance. The cardiac area was confined to its usual limits, and the sounds were healthy although the action was frequent. The position and extent of the abdominal organs were normal. The urine was measured a few days later, and found to amount to 20 fluid ounces per day. It was reddish yellow in colour, and highly acid, with a specific gravity of 1026. It contained no abnormal constituents, and gave, on quantitative analysis, 15·84 grains of urea per ounce, or 316·8 grains in twenty-four hours.

After thorough consideration and careful exclusion of every other possible disease the conclusion was reached, which seems unavoidable, that the patient was in an early stage of tuberculosis. The following mixture was prescribed:—

℞ Liquoris atropiæ,	. .	min. xij.
Quiniæ sulphatis,	. .	gr. lx.
Acidi sulphurici diluti,	.	fl. dr. iij.
Aquam, ad,	. . .	fl. oz. vj. M.

Sig. A tablespoonful in water three times a day before food, and the food was ordered to be at once simple and generous.

Nothing would persuade him to remain in Edinburgh beyond the next day, but he promised to return in three days, and to stay for a time under observation; he was therefore reluctantly allowed to go home to attend to some necessary business, although with some misgivings as to the prudence of permitting a man to go about with a temperature of 102°. He returned on the 28th, when arrangements were made for the registration of the temperature every two hours, and for the measurement of the urine, a specimen of which was daily tested for urea. His stay in Edinburgh was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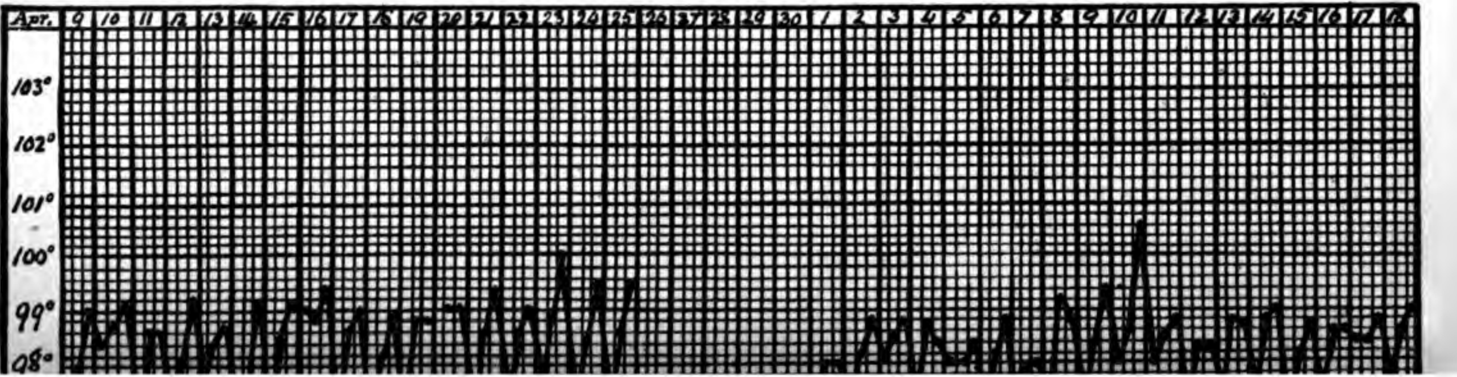
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continued until the 11th March, beyond which date he found it impossible to prolong it. He continued to take the medicine which has been spoken of, and the same description of food, and if the weather was good, and his temperature not above 100°, he was allowed out a little every day.

It were tiresome to follow all the details of his progress, and only a rapid sketch of it can be given here, which is filled in by facts noted on the temperature chart. For the first three days after his return the temperature was tolerably low, and the pulse did not exceed 80, but he perspired copiously every night. For some days afterwards, however, the temperature was high, and the pulse varied between 90 and 100, so it was deemed advisable to order him the following:—

℞ Quiniæ sulphatis, . . gr. xij.
Pulveris opii, . . . gr. vj.
Pulveris digitalis, . . gr. iij.
Misce et divide in pilulas xij.

Sig. One to be taken three times a day after food.

As already said, he returned to his home in the north of England on the 11th March, before which date the crepitation had disappeared and the harshness of the breath sounds became much less noticeable. Before permitting him to go home a promise was exacted that he would on no account attend to business more than two hours on any one day, and that he would, when in the chemical works, use a respirator with eucalyptus oil, in case any irritation of the pulmonary mucous membrane should be caused by the fumes given off during the chemical processes.

If we turn to the temperature chart, which begins with the 29th February, and on which the morning, midday, and evening temperatures are recorded, we see that there is a general tendency shown to a rise at night. On the 1st, 2nd, 3rd, and 4th March the morning temperatures were below normal, and until the 3d the evening rise was not much above normal, but from that date it rose considerably, culminating in a temperature of 103° at midday of the 7th. It came down after that date, but the evening record was always 100° or more until the 18th, when it was lower; next night, however, it was again 100°, but on the three succeeding evenings it was 98°·8, 99°·4, and 99°·6. The following morning, that of the 23rd March, he somewhat incautiously took a hot bath, which he blamed for a rise of temperature which began on that day, and reached its climax in the middle of the 25th, when there is a record of 103°·6. On the evenings of the 26th and 27th the temperature was 100°·8 and 98°·8. The low morning temperature readings again began on the morning of the 28th, and with the exception of the 10th and 16th April continued until the 25th, when unfortunately the thermometer was broken and could not be replaced for some days. Sometimes the morning temperature was extremely low, as for instance on the 9th, when it only reached 96°·2.

Since the beginning of April the evening temperature has only three times reached 100°, on the 4th and 23rd April when it was 100°, and the 10th May when it rose to 100°·6.

During the first half of May there was a gradual return to a steadier temperature, the morning records, however, being as a rule too low. From the 1st to the 18th the temperature only five times reached or exceeded 99°, and since the 18th it has never reached 99° except once, on the 22nd of that month. In like manner the pulse gradually became less frequent, diminishing from the extremes of 80 and 100 to the more moderate limits of from 65 to 75.

Until the 16th March the patient perspired profusely every night, but on the 16th and 17th he was free from night-sweats, which returned the two following nights. On the 20th, 21st, 22nd, and 23rd he was again free of them, but on the 24th, when there was a rise in temperature after an imprudent bath, there was a return of the perspiration, which recurred every night until the 30th, being, however, considerably diminished on the 28th, 29th, and 30th. Since that date there has not been a night sweat.

The daily quantity of the urine and of the urea can be seen at a glance from the following table:—

		Sp. gr.	Urine in oz.	Urea in gr.			Sp. gr.	Urine in oz.	Urea in gr.
Feb.	29	1026	20	316·8	March	14	1014	67	412·72
March	1	1020	35	400·4	„	15	1017	54	356·40
„	2	1022	49	517·44	„	16	1016	77	406·56
„	3	1026	50	682	„	17	1015	72	443·52
„	4	1021	48	443·52	„	18	1016	79	421·40
„	5	1019	62	463·76	„	19	1016	68	463·76
„	6	1020	57	476·52	„	20	1015	78	411·74
„	7	1020	49	431·20	„	21	1016	76	401·28
„	8	1021	46	465·52	„	22	1015	78	377·52
„	9	1017	52	457·60	„	23	1017	78	480·48
„	10	1021	41	396·88	„	24	1017	71	468·60
„	11	1021	not measured.		„	25	1016	64	450·56
„	12	1022	46	485·76	„	26	1017	62	672·88
„	13	1015	63	415·80	„	27	1020	56	492·80

From this date the analysis of the urine was discontinued. Along with the improvement in his general condition the patient gained weight steadily. On 13th March, two days after his return to England, his weight was 9 stone 1 lb. A week later it was exactly the same, but the following week it began to increase. The weight is given below with the dates on which it was taken.

March	13	9 st.	1	lb.	April	24	9 st.	12½	lb.
„	19	9 „	1	„	May	2	10 „	—	„
„	27	9 „	2	„	„	8	10 „	1½	„
April	3	9 „	9	„	„	15	10 „	—	„
„	10	9 „	9	„	„	22	10 „	1½	„
„	17	9 „	10½	„	„	30	10 „	2½	„

During the preceding month of June the weight has kept steadily at the last figure or slightly above it. Save for a slight return of hay-asthma, his condition has been very satisfactory lately; he eats and sleeps as well as formerly, performs his duties fully, plays tennis a great deal, and takes much out-door exercise of all sorts, especially on horseback—in fact, he writes that he is as well as he ever was in his life.

At present he takes small doses of quinine, and makes use of cold sponging and subsequent friction. There seemed to be no reason for alarm more especially on account of his lungs than for any other organ, but as there is undoubtedly such a condition as chronic pulmonary consumption of tubercular origin, dumb-bell exercise has been recommended, for if the current theory be correct, that the elective seat of disease is due to want of expansion of the upper portions of the lungs, it follows that shoulder exercise must be one of the best preventives of the morbid change.

The aim of this paper is to make use of the case narrated in order to advance the propositions that there is in disseminated tuberculosis a distinctive period which precedes the outbreak of the graver symptoms, that this early phase of tuberculosis ought to be better recognised than it is, and that it is curable.

V.—GUNSHOT WOUND OF COLON AND BASE OF LEFT LUNG. RECOVERY.

By C. J. KRIEKENBEEK, M.B., C.M. Edin.

FRED. L., a boy of 16, on his way out to China, was accidentally shot by the second steward of the s.s. "Glencoe," whilst carelessly handling an army revolver. He had taken the revolver out of a drawer, not knowing it was loaded, and stated afterwards that before he knew anything he heard the report, felt the bullet go through the palm of his left hand which was over the muzzle, saw L., who was standing about three feet in front of him at the time, stagger and cry out he was wounded. On being examined by the ship's surgeon, the steward was found with a wound through the palm of the left hand, splintering the metacarpal bone of the middle finger. The lad L. had a wound in the left hypochondriac region, the bullet going upwards and outwards, wounding the edge of the left lung and lodging beneath the skin of the back, from whence it was cut out by the ship's surgeon.

All this happened on the 10th of February in the Red Sea, and nine days after, the cases not doing well, and the surgeon wishing to have a consultation with a *confrère* on shore, the steamer put in at Point de Galle, and the cases were seen on board by my friend Surgeon Lloyd of the A.M.D. stationed here. He advised and superintended their immediate removal to this hospital, where I took charge of them.

The following is a condensed statement from notes taken on admission by my house surgeon, and my own entries, day by day, in the bed-head ticket and temperature chart:—

Frederick L., admitted 1.30 P.M., 19th February 1884. Has a hectic flush. Temp., 99°·6; pulse, 148; respiration, 54. Great dyspnœa. Lies flat on his back. Breathing short and hurried. Emphysema all over left side of chest, the crackling under the fingers extending down to Poupart's ligament on that side. Wound of entrance 3 inches to left of mesial line, between the cartilages of the 8th and 9th ribs; sucking in air with every inspiration. The wound of exit in the back was closed up, and there was a strong fæcal odour about him. Bowels not moved for several days. He was put to bed, and the wounds dressed under the carbolic spray with boracic acid and iodoform lint. Allowed brandy and ice, chicken broth, bread and milk, and beef-tea, and quinine and opium pills.

February 20th.—States he slept fairly well, and feels much easier. Bowels not moved. Takes nourishment well. Temp., 101°. Breathes easier.

Feb. 21st.—*In statu quo.* Temp., 100°·4. To have a castor oil enema.

Feb. 22nd.—Lies on his back still. Fæcal odour very marked in spite of carbolic spray and antiseptic dressings. No passage of fæces per rectum. Enema alone came away. This made me suspect, that in addition to the wound of the lung some portion of the intestine was also involved, and from the position and direction of the wound, and the circumstances stated above, that it was the end of the transverse, or the upper portion of the descending *colon. This had never struck any of us before.* Accordingly, I removed all dressings, and under the carbolic spray had him gently turned on to his left side, when there rushed out 64 oz. of dark coloured, foul smelling fluid fæces from the wound of entrance. The odour was most horrible, in spite of the carbolic spray and the sea breeze blowing through the eight open windows and three doors of the large ward upstairs. He was then placed again on his back, and four syringes full of weak carbolic lotion (1–120) syringed in; then turned again on his left side to allow it to run out, and this was done till the lotion ran out clear twice a day, and the wound then covered over with lint squeezed out of boracic acid solution and iodoform sprinkled between two folds. Under this treatment, the stuff that escaped every morning and evening when turned on to his side lost its marked fæcal odour, being now, in fact, nothing more than digested food, etc., voided through this novel artificial anus, just before it could go lower down the gut, and assume the usual fæcal odour. The temperature, pulse, and respiration became normal; the emphysema disappeared gradually, and the wound of entrance began to contract and heal. I should have stated before that the wound of exit had closed up a day or two after the bullet had been extracted, and before the patient came under my care. He continued to do well, and now stated "he felt inclined to go to stool but couldn't." A simple castor oil enema was administered, bringing away a little fæculent matter in small lumps. After this he began to pass dark coloured stools *per anum*, and the escape of fæcal matter through the bullet wound grew less every day, the wound itself contracting and healing rapidly; *too* rapidly, in fact, as the sequel showed! On the 5th of March, or seventeen days after admission, nothing came through the wound, which was now closed up by granulations. In twenty-four hours, however, his temperature, normal the previous days, went up at once to 103°·6; he complained of a feeling of tightness on the left side, and pain. Under treatment he felt easier, but soon after commenced to retch. This forced out through the wound a small quantity of the same stuff he used to pass before. Suspecting at once what had occurred, I gently enlarged the opening in the wound, and inserted a drainage-tube, the carbolic spray playing all the time, and on turning him on to his left side as formerly, 24 oz. of fluid excrementitious matter, similar to that passed before, came away. Weak carbolic lotion was syringed in again, till it ran out clear, and the drainage-tube left in the wound, which was covered over as before with boracic acid and iodoform lint. The temperature went down to normal at once, the discharge through the drainage-tube became less every day, and he passed his stools in the natural way. The wound commenced to contract and push out the drainage-tube, and on the 15th March the last bit of tube was forced out. He had been rapidly gaining strength, and was found one day trying to stand up. In a few days more he was able to walk to his chair, the wound being completely healed. By the 30th March he was quite well and fit to leave hospital, but had to wait for a steamer to take him on to his uncle in Hankow. On the 23rd April, an opportunity offering, he left for that port, quite strong, and in great spirits.

In conclusion, I may state that the steward had a very bad hand when admitted. The left hand and upper arm very much swollen and erysipelatous; temperature 101°, and edges of wound sloughing. This case was also always dressed under the carbolic spray with boracic acid and iodoform. Quinine and opium pills internally. In a few days the pain was very much less; he slept well; the swelling and erysipelas disappeared; the temperature (according to the chart) became normal, and by the 15th March the wounds had healed. The middle finger was stiff, and he could not bend it well, but with passive motion, in time, I am sure he will have his hand all right again. He also left on the 23rd April with his companion in misfortune, to rejoin his steamer in China.

VI.—ON ANTE-PARTUM HÆMORRHAGE, WITH SPECIAL REFERENCE TO A RECENT CASE.

By ANDREW S. CURRIE, M.D., Lydney.

(Read before the Edinburgh Obstetrical Society, 11th June 1884.)

THERE is no subject of greater practical interest than that of hæmorrhage connected with labour, and although much has been written by the most eminent obstetricians, and although, moreover, most modern writers are agreed as to the broad general lines of treatment of so-called accidental and unavoidable hæmorrhage, there are some points on which it is desirable to have more light. I do not for a moment pretend that my purpose in making this communication is to add to the knowledge which we have acquired from the valuable treatises of such men as Simpson, Ramsbotham, Barnes, and Playfair; my aim is to elicit discussion on certain points in regard to the management of some of these most anxious cases. I am the more inclined to contribute this paper, owing to the fact that a case occurred recently in this neighbourhood, although not in my own practice, which possessed certain features of peculiar interest and difficulty, and which to me personally was a matter of no small importance. It involved, besides, certain questions of a medico-legal and ethical nature, but on this subject I shall not dwell in this communication further than is necessary to fill in the details of the clinical history.

On Friday, the 7th March 1884, my colleague, Mr R., was summoned to Mrs H. on account of flooding. He arrived at the house at 6.30 P.M., and found that all bleeding had ceased. The woman's clothing was only slightly stained, and her pulse was of fair strength and normal as regards rate, being about 70. There was a total absence of labour pains, and the os was not at all dilated. The patient had flooded in the early part of January, but the bleeding soon ceased under the usual treatment by rest, mineral acids, opium, etc. On this occasion she was apparently considerably alarmed, and her feeling of dread was not lessened by the women in attendance, who talked loudly about the "fearful flooding," saying that the place had been like a slaughter-house before the doctor arrived, etc., etc. The patient, it appears, had been startled sometime previously by a monkey jumping suddenly upon her, and the midwife and her coadjutors, of whom there seem to have been several, discussed the question whether the child when born would not present more or less monstrous appearances. Owing to the patient's anxiety, Mr R. remained in the house and watched her till 9.30, and as by that time there was no evidence of commencing pains, as the os was undilated, and as there was not any recurrence of hæmorrhage, he decided to leave her. Before going home he gave instructions that the patient was to be kept strictly in the recumbent posture, and he told the midwife to apply cold cloths to the abdomen and vulva if there was any return of bleeding. He told the woman to send at once in the event of hæmorrhage recurring or labour pains beginning, and he administered an opiate. ·I omitted to mention that a cranial presentation had been diagnosed.

About five in the morning of the following day (Saturday) Mr R. was again sent for, but on his arrival at the house the patient was dead. She had, contrary to orders, got out of her bed at half past three (up till that hour there had been no recurrence of hæmorrhage), and immediately on her assuming the erect posture there had been a sudden gush of blood, she got very faint, said she was dying, and expired before help could be procured. The friends asserted that the doctor should not have left his patient on the previous evening, and that her death was due to neglect. Under these circumstances an inquest was ordered to be held, and I was requested by Mr R. to attend the post-mortem examination which was ordered to be made by Mr C. Dr Trotter of Coleford was also present. I have full notes of the autopsy, but it will not be necessary for me to do more than mention the salient points. The uterine walls were unnaturally thin, and the placenta was attached to the anterior wall, fundal and meridional zone, overlapping to a very slight extent the lower polar circle. At the lower and right margin there was separation to the extent of half or three-quarters of an inch, and there was a recent dark clot. The placenta was extremely friable, and broke down in the attempt to detach it, and there were some old fibrinous adhesions between it and the uterine wall. On laying the amniotic sac open a full grown male fœtus was found in Naegele's first position. The os was dilated to the size of half a crown or rather less. The heart was loaded with fat, and especially so on the auricles. There was nothing remarkable about the valves or cavities, but the ventricle was very greasy on section, and under the microscope I found advanced fatty degeneration.

At the inquest Mr R. stated the history of the case and the treatment he had adopted, which the coroner remarked did not appear to have been very successful. Mr C. stated the results of the post-mortem, but said that the heart disease was not sufficient to account for death, and that Mr R. should have plugged the vagina. The coroner, in his summing up, said that there could be no doubt that the woman's death was due to her not having been plugged, and that had this measure been adopted, Mr R. would have left his patient in perfect security. Acting on his advice, the jury censured Mr R. for error of judgment and neglect.

Now, the first point which strikes one in this case is this—should the liquor amni have been evacuated on the Friday evening? There could be no doubt from general appearances that the woman was not very far from her full term, but there was an element of doubt, inasmuch as no note had been made by her of the date of fœtal movements being first perceived, and she had not menstruated since her previous confinement. In cases of hæmorrhage, according to most recent authorities, we are not to temporize after the seventh month. But here we have the fact that the hæmorrhage was not so great as to affect the pulse, and, moreover, it had ceased entirely and spontaneously. In laying down rules for guidance in cases of placenta prævia (in which class I place the present case, although the encroachment on the cervical zone was to the very slightest possible extent, in fact, if I may say so, the case was on the boundary line between accidental and unavoidable hæmorrhage), Playfair[1] says, "in all cases in which it can easily be effected, the membranes should be ruptured. . . . . If the hæmorrhage be stopped the case may be left to nature." Barnes[2] says, "the puncture of the membranes is the first thing to be done in all cases of flooding sufficient to cause anxiety before labour." Do the rules now given, expressing the opinions of these two eminent authors, apply to the present case? I think not. As I have said, the hæmorrhage was not alarming, and it had ceased. Puncture of the membranes, though perfectly feasible, would not have been easy with an undilated os. Had there been either central or marginal placenta prævia, matters would have been different. It would clearly have been Mr R.'s duty to puncture the membranes at all risks, and to effect partial separation of the placenta afterwards, if necessary, by Barnes' method. But it will surely not be laid down as an absolute dogma that in every case of bleeding before labour, no matter though the amount lost may have been slight, though it may have ceased, and though there is total absence of labour pains, that it is an invariable duty to interfere actively. This is not the light in which I understand the writings of Playfair and Barnes, and I believe I am correct in saying that it was not the doctrine of Sir James Simpson. Sir James[3] says in the synopsis of lecture notes—"Palliative treatment.—This is to be employed if the hæmorrhage be slight and pregnancy not completed. 1. Recumbent position, etc." "Radical treatment.—This is to be resorted to if the hæmorrhage be severe, or the full time arrived." Again, Ramsbotham[4] says, in laying down rules as to vaginal examination, "I shall now presume that labour has not commenced, that the term of gestation is not fulfilled, and that the discharge has entirely or nearly subsided on our arrival." He then proceeds to detail the rules for palliative treatment, which I need not quote. It would appear, then, that Ramsbotham and Sir James Simpson endorse by their writings the practice which Mr R. adopted in this case, and I do not think, to put it in the mildest possible way, that any censure could be based on the writings of Barnes and Playfair.

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[1] *Science and Practice of Midwifery*, 2nd edition, vol. ii. 93.

[2] *Obstetric Operations*, 2nd edition, p. 424.

[3] *Selected Obstet. Works*, p. 67.

[4] *Obstet. Med. and Surg.*, p. 406.

Now, it seems to me that in regard to this point only, that, namely, of the advisability of puncturing the membranes in the first instance can there be any room for doubt, but here there arises this very important consideration, that apart altogether from the question of its being easily performed, a question which Barnes attaches no small weight to, the operation in this particular instance would have been of very doubtful utility; for, as Sir James Simpson says, it "is principally successful in incomplete presentations, not often when the presentation is complete."

The next point is one which I should not have thought it necessary to treat of, or at any rate to dwell upon, had it not been for the prominence given to it at the inquest by Mr C. It is the question as to the use of the plug. Every one knows that the use of the vaginal plug has been recommended strongly by certain authorities in all cases of hæmorrhage connected with labour. Its use in post-partum hæmorrhage is now universally condemned. Léroux[1] recommended it in all forms of flooding more than a hundred years ago, and in recent years the practice has been advocated in all forms of ante-partum hæmorrhage by Fleetwood Churchill[2], but the principle on which that eminent author bases the practice appears to me, I say it with all deference, a very dangerous one. "If you remember that the uterus is so filled, that internal hæmorrhage cannot take place to a great extent, you will see that by plugging the vagina thoroughly, all external hæmorrhage can be stopped." Dr Churchill here writes as if such a thing as concealed accidental hæmorrhage were a thing unheard of, but yet he has described this form of bleeding, and quotes Braxton Hicks to show the great mortality in these cases—15 out of 23. Surely then he advocates a plan which, despite his assertion to the contrary, may convert an ordinary accidental hæmorrhage into a case of concealed hæmorrhage.

I venture further to contest Churchill's dictum in regard to unavoidable hæmorrhage.[3] "Fortunately," he says, "in the plug well applied, we possess a means of control over the discharge, for in this variety there is absolutely no danger of internal hæmorrhage." May not the bleeding go on, slowly stretching the utero-placental attachments, and gradually rupturing the vessels, permitting a steadily increasing accumulation of blood all the more dangerous for its being effectually dammed back by the plug, and consequently going on unsuspected till dangerous symptoms manifest themselves? I assert that Barnes' dictum that if the plug is applied, it should not be left more than an hour without the most careful examination, to satisfy one's self that hæmorrhage is not going quietly on, the blood either flowing past the plug, or being dammed up behind it, is more in accordance with the results both of theory and practice.

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[1] *Sur les Pertes de Sang*, p. 270.

[2] *Theory and Practice of Midwifery*, p. 500.

[3] *Loc. cit.*, p. 506.

The statement of the coroner that the use of the plug in flooding is an infallible specific is too absurd to require argument to disprove it. Are we to conclude that in cases of ante-partum flooding the plug is useless? Assuredly not. It is of the greatest possible use properly applied, in properly selected cases. But it is a *sine qua non* that the plug should be properly and thoroughly employed. It is not enough to stuff the vagina. Before doing so the os must be satisfactorily plugged. I have found in my own practice that the best way to do this when the os is not large enough to admit a Barnes' bag, is by means of one or more laminaria tents. Having efficiently plugged the os, I then plug the vagina with pledgets of absorbent cotton, thoroughly soaked in carbolized glycerine, each pledget having a stout thread attached, so as to permit easy withdrawal when necessary. But obviously, in adopting this plan, one has decided that labour must be soon brought on, if pains have not begun, and hence used in this, which I think is the only efficient and safe way, the plug cannot be said to be a means of temporizing. I will even go the length of saying that if palliative measures are to be adopted, the vaginal plug must not be one of them, for as I have already insisted, it is apt to lull us into a false security. No wonder that Ramsbotham says of it, that it is likely to add to the hazard; that Sir James Simpson characterizes its use as doubtful in unavoidable, and doubly doubtful in accidental hæmorrhage.

Some time ago I was called to a case of flooding in a pluripara, but, as in the case which forms the subject of this paper, the bleeding had entirely ceased before my arrival; the os was not at all dilated, and there were no pains. The woman had been over-exerting herself, and the flooding had come on suddenly. As the bowels were loaded, I prescribed an enema of hot water, and enjoined absolute rest in bed. I was not summoned to the patient again for a fortnight, during which time there had been no recurrence of bleeding. On my arrival on the second occasion, I found that the bleeding had been very profuse, and though now less, that it was continuous. I plugged the os and vagina, and at the end of an hour, as I found that blood was flowing past the plugs, I removed them. The os was now dilated to the size of about a five shilling piece. The placenta could be felt partially detached at the right side of the cervix, within about half an inch of the external os. There were even now no uterine pains, in spite of the free administration of ergot, and frequent frictions through the abdominal wall of the uterus. I ruptured the membranes (the presentation was a first cranial), and as flooding continued, separated the placenta as far as I could reach with my finger. I then forcibly dilated, as well as possible, the os with my fingers, till my hand could be fairly passed into the uterus, when I seized a foot, turned, and delivered. There was not a uterine pain from first to last. The placenta was removed by expression. Mother and child both did well. Now, in regard to this case, I cannot help thinking that active measures on the first occasion of my being summoned would have been meddlesome, and that temporizing measures were amply justified. On the second occasion, nothing short of the measures adopted would have been effectual. My contention that in cases of placenta prævia, where there is no alarming hæmorrhage, intervention is not called for, is borne out not merely by the practice of the authorities I have already quoted, but also, I think, by the beautiful theory of Jacquemier of the mechanism of hæmorrhage in the later stages of gestation,—a theory, I may add, which has the high sanction of Dr Matthews Duncan, from whom I borrow the following quotation. Speaking of the placental separation and consequent bleeding, Jacquemier says,[1] "Elle peut se manifester lorsque le placenta recouvre l'orifice interne, et lorsqu'il en est seulement plus ou moins rapproché par sa circonférence. Dans le dernier cas, et même dans celui où il recouvre l'orifice par son bord seulement, la perte après s'être produite une ou pleusieurs fois, peut cesser définitivement, et l'accouchement avoir lieu à terme sans qu'elle se reproduise. En effet lorsque la portion du placenta qui avoisine l'orifice ou le recouvre a été décollée, et que l'extravasation sanguine a cessé, la tendance à de nouveaux décollements partiels peut disparaître, parceque les progrès de l'ampliation de la partie inférieur de l'utérus éloignent très sensiblement le bord du placenta le plus exposé à de nouveaux décollements du centre du segment inférieur, qui est la partie la plus distendue mécaniquement, et parceque le tiraillement diminue du bord inférieur du placenta au bord supérieur, qui se trouve assez haut dans la cavité de l'utérus."

The case which Jacquemier supposes where the internal os is only more or less approached by the lower placental margin, and where after one or more losses the bleeding may finally cease, and labour take place at full term without any further hæmorrhage, owing to the gradually increasing distance between the lower placental margin and the lower uterine segment, seems to me to be one for palliative measures *up to a certain point.* This view seems to coincide with the teaching of Duncan, who says[2]:—"The delay of detachment and bleeding, in cases where the margin of the placenta only approaches the internal os, but does not reach it, arises from the circumstance that a detaching amount of expansion is first produced at the margin of the internal os. . . . . At parts remote from the internal os, the whole or final amount of expansion is slight, and it is only when it has reached its maximum, or near it, that detachment of the placenta is produced."

Another important consideration in the case I am considering is this, that it is impossible to say definitely and decidedly what was the exact cause of death. Death may have resulted from one or more of several causes. (1.) It may have been due to the sudden loss of blood, and to maintain this view it is not necessary to suppose that the loss was excessive. It is now a universally accepted axiom that a sudden loss from a very small area of detachment may produce more serious results than a larger flooding which has progressed slowly. (2.) The extensive fatty degeneration of the heart cannot be disregarded. This woman ran the risk of sudden death apart from any complication. No one can say that this was not *the* cause of death. (3.) The fatal result may have been due to the sudden depression of an already enfeebled heart by the hæmorrhage. (I do not think it necessary to discuss the question of the fatty heart in reference to the good state of the pulse on the previous evening. Walshe, Balfour, and Quain have shown that a fairly good pulse is not at all inconsistent with extensive fatty degeneration.) (4.) Nervous shock from alarm may have conduced in no small degree to the patient's death. The poor woman's friends had discussed freely in her presence the probability of her being delivered of a monstrosity in the shape of a monkey. (5.) At 9.30 on the Friday night the os was undilated, but at the post-mortem it was found to be about the size of a florin. Labour had evidently begun. Playfair mentions fatty heart as one of the causes of sudden death in the early stages of labour.

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[1] *British Medical Journal*, vol. ii. 1873, p. 599.

[2] *Ibid.*, p. 598.

In connexion with the state of the os found after death, I may observe that, considering the distance of the placental margin from the os, and the small extent of stretching to which the lower segment of the uterus had been subjected, it seems fair and reasonable to conclude that the separation of the placenta which occurred, was due, not to uterine action, but to the sudden effort which the woman made in getting out of bed. In fact, the woman had herself and no one else to thank for the recurrence of hæmorrhage.

Writing in 1873, Dr Matthews Duncan[1] says of unavoidable hæmorrhage:—"The treatment in this very grave class of cases is in an unsettled state; and it will probably remain so until the whole theory of the hæmorrhage is surely established."

We ought, then, to be very careful in criticising the treatment of any particular case by a professional brother. Much more should we be careful not to speak confidently of the safety of this, that, or the other plan of treatment. If a patient dies, and a practitioner happens to say, Had the case been his, he would have adopted such and such measures, the friends are too often ready to conclude hastily that a life has been thrown away through defect of skill, and a grievous injury, as in this case, is done to the medical attendant.

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[1] *British Medical Journal*, vol. ii. 1873, p. 597.

I am conscious of many defects and omissions in this paper, but if some of these defects are corrected and omissions supplied, and, above all, if a discussion on this ever fresh and interesting theme should arise in consequence of what I have written, I shall feel that I have not written altogether in vain.

VII.—THE ANATOMY AND RELATIONS OF THE UTERUS DURING THE THIRD STAGE OF LABOUR AND THE FIRST DAYS OF THE PUERPERIUM.

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(*Communicated to the Edinburgh Obstetrical Society,* 12*th March and* 16*th July* 1884.)

Our knowledge of the anatomical changes in the uterus after the expulsion of the child and during the early puerperium is very defective. Recent investigation has thrown some light on the anatomical relations of the membranes before labour has begun, on the mode of delivery of the placenta and membranes, and on the subsequent changes in the interior of the uterus, especially at the placental site. But we are still quite in the dark as to the time and mode of detachment of the placenta and membranes,[1] and even on the above-mentioned points the ascertained facts are few, and there is difference of opinion as to their interpretation. The anatomical relations of the post-partum uterus have not been accurately described.

It is remarkable that on a subject that has so many practical bearings our knowledge is so scanty. The much disputed question of the management of the third stage will never be settled until the physiological process is known, for scientific treatment is always that which most closely imitates nature. Adherent placenta will be elucidated by a knowledge of the normal attachment and separation of the placenta. Post-partum hæmorrhage is certainly related to the local changes in the vessels, as well as to the contraction of the uterus. Puerperal septicæmia, and more remotely endometritis, are also caused by a disturbance of the normal changes. Pelvic inflammation in the puerperium becomes more intelligible when we know the normal anatomical relations of the post-partum uterus.

The reason for the deficiency in our knowledge is twofold. In addition to the ordinary difficulties of clinical investigation, there is this special one—that it is not justifiable, if it were possible, to examine the interior of the uterus in normal cases during the third stage. For anatomical investigation, it is difficult to get suitable material: it must be fresh, and from a normal case. The post-partum uterus rapidly undergoes post-mortem changes, and everyone knows how, for instance, the pathology (and treatment) of erosion of the cervix suffered from the examination of faulty material. As the majority of deaths in the early puerperium are due to pathological changes in the uterus, the difficulty of getting normal post-partum uteri is great. The material which I have as yet collected is small, but it brings out some facts which have not been recorded. Before describing it we must give a *résumé* of the work which has been already done.

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[1] And yet we read, in a recent article on the physiology of the third stage of labour,—"At present it is to be considered as an ascertained fact (?), and one can convince himself of it in every case, that immediately after the birth of the child the placenta becomes detached, as the result of the diminution of the placental site, and then remains folded towards its uterine surface within the uterus," etc.—*Archiv f. Gyn.*, Bd. xxiii. p. 286.

HISTORICAL RÉSUMÉ.

We give here the literature of the minute anatomy of the membranes, so far as it bears on their mode of separation and the changes in the uterus post-partum; and that of the separation and expulsion of the placenta.

A. *Anatomy of Membranes and of Interior of Uterus post-partum.*

William Hunter anticipated the results of more recent investigation by describing the post-partum uterus as lined by "a stratum" of the decidual membrane,[1] which did not come away on delivery. This stratum we now know to be a portion of the deeper spongy layer of the decidua.

Chisholm[2] describes the interior of the uterus in a case that died on the seventh day post-partum. He also gives the results of investigations on the uteri of lower animals, and describes follicles as being present in the lining membrane of the uterus after delivery.

Matthews Duncan draws attention to the above-mentioned statement of Hunter, in an interesting paper on the "History of the Mucous Membrane of the Body of the Uterus."[3] In a more recent contribution[4] he maintains that this is the correct view, in opposition to that of Cruveilhier and of Heschl, who asserted that the inner surface of the uterus was laid bare down to the muscular coat. He gives the results of the examination of several post-partum uteri in support of this.

W. O. Priestley[5] describes, amongst other preparations, a uterus from the ninth month of gestation, in which he found that the membranes when artificially detached left "a layer of nucleated particles, subtended by delicate fibrous tissue lying between the muscular fibres and the decidua."[1] He also speaks of "tubular follicles deeply planted in the uterine substance, which do not separate with the membranes, but remain as centres of reproduction, to assist in spreading a thick secretion of epithelium over the surface of the uterus when occasion requires."[2]

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[1] *An Anatomical Description of the Human Gravid Uterus and its Contents*, p. 55.

[2] *Monthly Journal of Medical Science*, Sept. 1854.

[3] *Edin. Med. Journ.*, 1857-58, vol. iii. p. 688, and *Researches in Obstetrics*, p. 222.

[4] "The Internal Surface of the Uterus after Delivery," *Researches in Obstetrics*, p. 186.

[5] *Lectures on the Development of the Gravid Uterus.* Churchill, London, 1860.

Dohrn[3] was the first to give a clear and complete account of the minute anatomy of the membranes; but his original paper does not bear specially on their separation.

Friedländer[4] gives the results of the careful microscopic examination of a uterus from an early period of gestation, and also from the sixth and the eighth months, also one 14 hours, and another three days after delivery. He describes the decidua in the later months of gestation as differentiated into two layers—an inner cellular and outer glandular. The inner consists superficially of cells, ·02–·06 mm. thick, mostly rounded, and separated by a delicately punctate intermediate tissue; more deeply it is mainly composed of fusiform cells. The outer or glandular layer shows compressed cavities, which only exceptionally communicate with each other, and are usually empty. These are lined with a single layer of cylindrical epithelium. During the first week after delivery he found the whole of the glandular and part of the cellular layers lining the uterus, and he concludes that both the membranes and placenta are detached in the plane of the cellular layer. In the second week the cellular layer comes away in the lochia, and the glandular spaces are opened into. Subsequently the epithelium of adjoining exposed gland-spaces comes to be continuous through the melting down of the intermediate tissue. He was the first also to describe the spontaneous thrombosis of a large number of the uterine sinuses beneath the placental site. This is seen in the eighth month, and still more at full time, an[illegible]s effected by the plugging of the sinus with large granular cells, by coagulation of the blood, and by the formation of young connective tissue.

In a second[5] paper he confirms these observations as to the plane of separation of the membranes and the occurrence of spontaneous venous thrombosis.

Kundrat and Englemann[6] have examined three uteri with ova, and two from which ova had been expelled, from the first month;

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[1] *Lectures on the Development of the Gravid Uterus*, p. 99.

[2] *Ib.*, p. 100.

[3] "Ein Beitrag zur mikroskopischen Anatomie der reifen menschlichen Eihüllen," *Monats. f. Geburtskunde*, 1865, p. 114.

[4] *Physiologisch-anatomische Untersuchung über den Uterus.* Simmel, Leipzig, 1870.

[5] "Ueber die Innenfläche des Uterus post-partum," *Archiv f. Gynäk.*, Bd. ix. s. 22.

[6] "Untersuchungen über die Uterus-schleimhaut," *Stricker's Med. Jahrb.*, 1873. In *American Journ. of Obstet.*, May 1875, Englemann embodies these investigations in a very full and interesting paper on "The Mucous Membrane of the Uterus."

one with ovum, from the second; two with ova, from the third; and nine with ova, from the fourth month to full time; also several post-partum uteri. They confirm Friedländer's description of the membranes, but find the spaces in the spongy layer to have lost their epithelium in the later months, except at the very bottom of the glands, and speak of the entire spongy layer as remaining in the uterus post-partum. Along with Friedländer, they describe as belonging to the decidua a layer of cells, which we shall see Kölliker, Dohrn, and others rightly refer to the chorion.

Langhans,[1] describing a uterus from the 14th week of pregnancy, divides the decidua into three layers, according to the condition of the glands: the upper containing their straight ducts, widely separated by decidual cells; the middle, their dilated and convoluted portions, which produce the appearance of a spongy layer; the lowest, their contracted terminations. Underneath the placenta the last layer is not distinguishable; at its margin the spongy layer is very well developed. This preparation suggested to him that the line of separation was in the spongy layer, and examination of uteri from the 20th and the 30th week and at full time strengthened this view. In the post-partum uterus he found a reticular appearance, which he ascribes to the divided glandular spaces. There was no fatty degeneration along the plane of separation.

Leopold[2] gives a very complete and consecutive account of the membranes at the various periods of pregnancy. His material was as follows:—From 1st month, in addition to some separated ova, one uterus with ovum; from 2nd, four ova, some still attached in part to uterus; from 3rd, septate uterus with ovum, as well as three isolated ova; from 4th, two uteri; from 5th, two uteri; from 6th and 7th, three uteri; from 8th, two fresh uteri; at full time, one fresh uterus, as well as other spirit-hardened ones. A full description is given, illustrated by beautiful coloured drawings, which, though reproduced from photographs for exactness, are somewhat diagrammatic in their detail. The most important facts with regard to the membranes may be thus summarized,—the two layers of the decidua vera, compact and ampullary (cellular and glandular, as named by Friedländer), are distinguishable from the first. On separating the membranes artificially by traction, in a uterus at the eighth month, "the tear runs in the meshy layer of the decidua," the septa between the spaces breaking across; two-thirds of the decidua vera remain attached to the uterine wall, and a number of arteries and veins are torn across. He confirms Friedländer's observation as to the occurrence of spontaneous thrombosis in the veins below the placental site, and finds the same change in the serotinal veins.

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[1] "Die Lösung der mütterlichen Eihaüte," *Archiv f. Gynäk.*, Bd. viii. s. 287.

[2] "Studien über die Uterus-schleimhaut während Menstruation, Schwangerschaft, und Wochenbett, II. Theil," *Archiv f. Gynäk.*, Bd. xi. s. 443.

Blacher,[1] from the examination of fresh placentæ, two ova at he third month, some spirit preparations at various months of pregnancy, and one fresh uterus at end of pregnancy, maintains that a few of the spaces in the spongy layer are glands, but that the majority are dilated veins, and that they are more numerous in the decidua serotina than in the vera. The difference in his results may be due to his having injected his preparations, which would distend the sinuses and compress the gland spaces; otherwise, it is difficult to reconcile his statements with those of the majority of other observers.

Küstner[2] has examined the membranes after delivery, and finds the layer of decidua on the chorion to be thickest near the placenta; usually it has a honey-combed appearance, which means that the separation has taken place in the spongy layer; where this is absent, and the decidual layer on the chorion is thin and smooth, separation has occurred in the compact layer. Round the rent in the bag of membranes the chorion was sometimes (in 12 out of 52 cases) bared of decidua, which began distinctly at some distance from it; in the other cases the decidua was continued up to the rent, but as a thinner layer. This implies a difference in the thickness of the presenting bag of membranes.

Kölliker[3] has made a fresh investigation of the glands in the decidua during pregnancy, which he described in the first edition (1861) of his *Entwickelungs-geschichte.* The hypertrophy at first affects the whole course of the glands, but is afterwards limited to their upper and middle portions,—the latter forming the spongy layer; in the last months, after the blending of the vera and reflexa, they disappear, not only in the cellular but also in the upper part of the spongy layer. Their epithelium becomes destroyed from above downwards, and at last may only be found at the very bottom of the glands.

B. *Separation and Expulsion of the Placenta.*

The literature on this subject is scanty. The mode of expulsion of the placenta has been studied clinically, but, so far as we know, no anatomical observations have been made. As to its separation still less is known, nor can we reason from the results of experiments on animals to the human female.

Lemser[4] experimented on dogs to ascertain the mode of the separation of the placenta, with the following results:—During an early period uterine contractions produced by the vivisection-experiment do not detach the placenta; at a later period, if not detached by diminution of the placental area, it is by the general compression of the uterus; at full time it is more quickly and completely separated by the uterus contracting on it, than by diminution of the placental area. He studied also the mode of its delivery clinically, by passing the hand into the uterus before the expulsion of the child. He found the placenta presenting by its lower margin in 79 cases which he examined; it lay folded towards the maternal surface in 48 cases, and towards the fœtal in 13.

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[1] "Ein Beitrag zum Bau der menschlichen Eihüllen," *Archiv f. Gyn.* Bd. x. s. 459.

[2] "Die Lösung der mütterlichen Eihaüte vor und bei der rechtzeitigen Geburt," *Archiv f. Gynäk.*, Bd. xiii. s. 422.

[3] *Entwickelungs-geschichte des Menschen und der höheren Thiere,* IIe. Aufgabe, Leipzig, 1879.

[4] *Die physiologische Lösung des Mutterkuchens,* Giessen, 1865.

Schultze[1] affirmed that the placenta is usually expelled with its fœtal surface bulging forwards, so that this presents at the os uteri (*v.* Fig. 1, A), and that blood is effused beneath the placenta, which favours its being driven onwards.

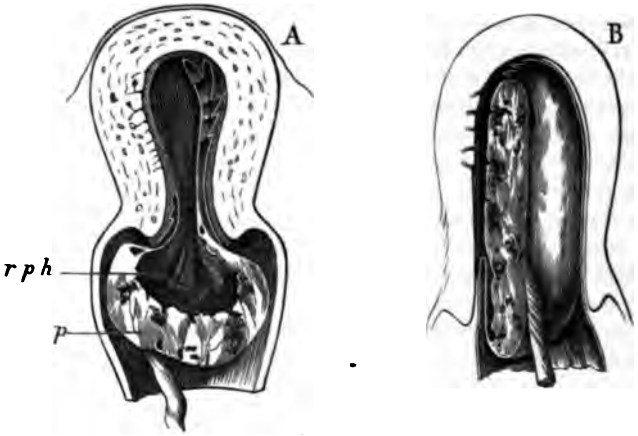

FIG. 1.—MODE OF EXPULSION OF PLACENTA: according to SCHULTZE (A—*r p h*, retro-placental hæmorrhage, *p*, placenta); according to MATTHEWS DUNCAN (B).

Matthews Duncan[2] has described the mode of expulsion of the placenta very clearly, as the result of his own clinical observations. He shows that the usual mode of its expulsion is that represented in Fig. 1, B; that thus the placenta passes the cervix in the smallest bulk, and there is no retro-placental hæmorrhage; that the mode of expulsion described by Schultze is due to traction from below.

Ahlfeld[3] is, as far as I know, the only one who has studied the mechanism of the separation of the placenta on a uterus from Porro's operation. As his preparation is the only one which we have to compare with two which we shall presently describe, we give his results more fully.

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[1] *Wandtafeln zur Schwangerschaft und Geburtskunde.*

[2] "On the Mechanism of the Expulsion of the Placenta," *Edin. Med. Jour.*, April 1871.

[3] *Berichte und Arbeiten aus der Geburtshülflich-gynäkologischen Klinik zu Giessen*, 1881-82, Leipzig, 1883.

The operation was performed for contracted pelvis; the pains began three weeks before full time; the elastic ligature was thrown round the lower uterine segment before the uterus was incised. The uterus, four hours after the operation, was 16 cm. long. and 15 cm. broad. The wound, by which the child was removed, lay two-thirds on the anterior wall and one-third on the fundus; it was 6 cm. wide, and the upper edge of the placenta projected through it. The placenta was attached all over, most firmly at its margin, except at the upper part; when the finger was introduced here, it could easily detach it towards the centre. As to the membranes, the amnion was stripped off as far as the cord, while the chorion covered all the inner wall, and so firmly that it could with difficulty be separated; the membranes were nowhere raised by hæmorrhages. On slitting open the anterior wall of the uterus it was noted that the placenta measured 15 cm. (5¾ in.) long, and 12 cm. (4¾ in.) broad, and was situated entirely on the posterior wall. The finger could be easily pushed into the heart of the placenta, but the margin was firmly attached.

The uterus was put in Müller's fluid in a flat vessel, and next morning it was observed that the contraction had increased, the placental area being smaller and the uterine wall thicker. The placenta also bulged outwards. The cavity which had begun to form at the upper end was more spacious, so that the finger could easily be pushed into the centre of the placenta. It was still adherent round the margin.

From this preparation Ahlfeld argues that "the diminution of area in the placental site is the most important factor in the separation of the placenta. Since a separation at the margin cannot result, as a rule, in the first stage, the central portion is elevated. The cavity, thus formed, is by aspiration filled with blood."

Unfortunately the manipulation of the specimen prevents us from drawing any conclusions from it. The following criticism on his conclusions naturally suggests itself: the placenta did detach spontaneously at one part of its margin, the pushing in of the finger would detach it still more; the slitting up of the anterior wall would allow the bulging to spread from the point when it had been artificially started. As we shall see, when we come to describe our own specimens, it is misleading to speak, as Ahlfeld does, of a uterine cavity into which the placenta can bulge.

DESCRIPTION OF PREPARATIONS.

The preparations which I shall describe are the following:—

I. Uterus with placenta and membranes undisturbed, from a case of Porro's operation.

II. Uterus with placenta *in situ,* and membranes partially separated, from a case of Porro's operation. This and the foregoing preparation I owe to the kindness of Professor Simpson.

III. Uterus with placenta, attached in part, from a case of abdominal section for hæmorrhage during labour. For this I am indebted to Dr P. A. Young.

IV. Frozen section of pelvis from a case that died from post-partum hæmorrhage 1½ hours after delivery.

V. Uterus from a patient who died of eclampsia 40 hours after delivery.

VI. Uterus from a patient who died of phthisis about two days after delivery. Professor Greenfield kindly gave me this preparation.

PREP. I.—*Uterus with Placenta and Membranes Undisturbed, from a Case of Porro's Operation.*

The operation was performed for a contracted (rickety) brim, at full-time, and when the pains were commencing; the uterus was incised, and the child extracted before the ligature was thrown round the lower uterine segment—hence the blood was free to circulate in its walls; the child was removed without any disturbance of the membranes.

While the preparation was fresh, the following notes were made:—The uterus, containing the placenta, measures 5½ in. vertically, 5 in. transversely, and 2¾ in. antero-posteriorly; it weighs 3¼ lb. On the anterior surface is a gaping oval wound (Fig. 2, *a b*) which measures 2¾ in. vertically and 2½ in. transversely; the umbilical cord hangs out of it, and through it is seen the free surface of the placenta covered with the amnion. This wound represents the opening through which the child was extracted. It is important to note that no part of the membranes hang through it; the knife has made a clean cut into the uterine cavity, and the fœtus has been lifted out without any disturbance of their relations. At the inferior end is a wound (*c d* in Fig. 2) which measures 3 in.

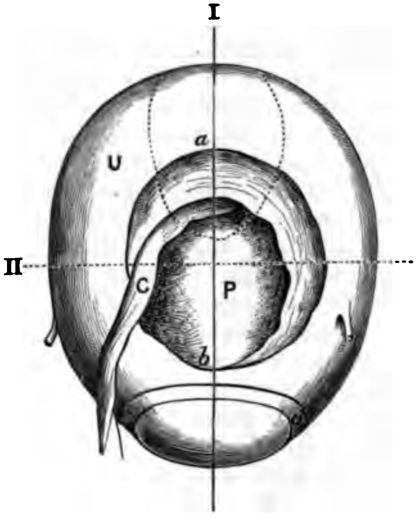
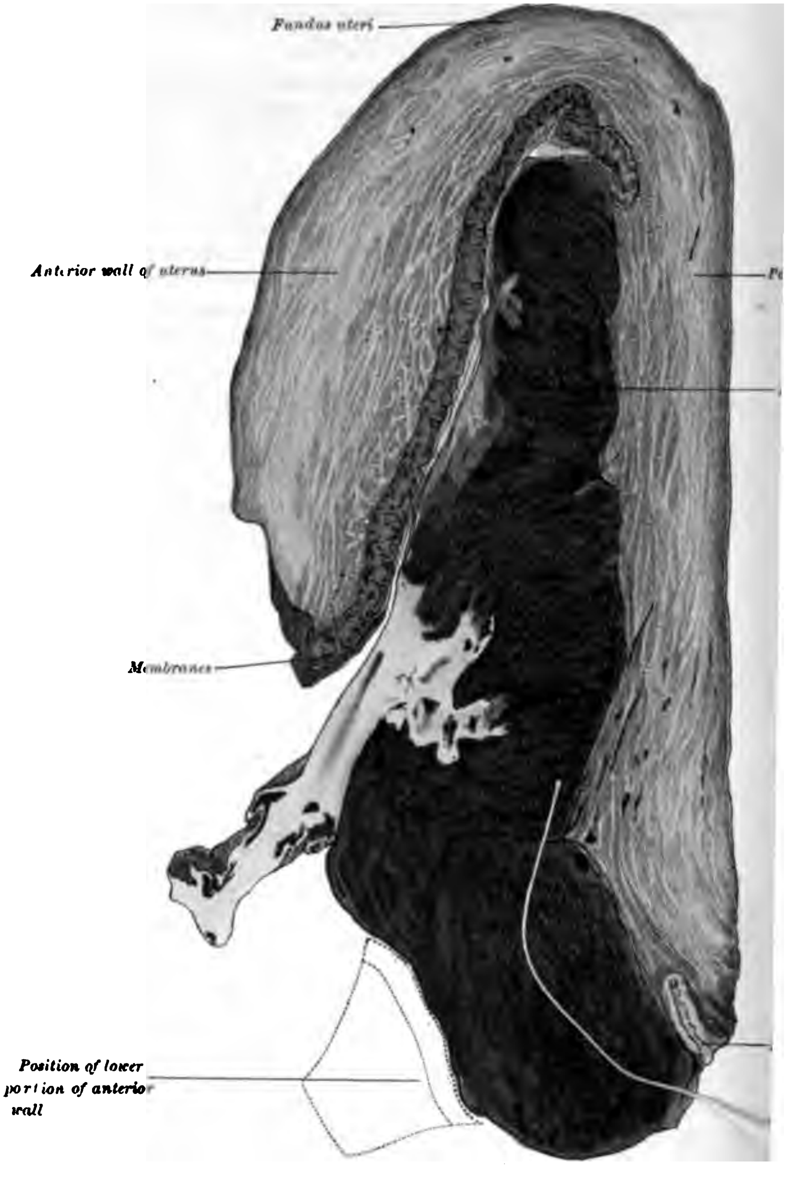


FIG. 2.—Uterus, seen from the front, with placenta *in situ*, from a case of Porro's operation. U, anterior wall of uterus; P, fœtal aspect of placenta; C, umbilical cord; *a b*, wound through which fœtus was extracted; *c d*, wound representing line of amputation of uterus. Line I. shows direction of section given in Plate I. The dotted lines indicate the higher position of the wound through which fœtus was extracted in the second case of Porro's operation, and the direction of the section given in Plate III.

PLATE



VERTICAL MESIAL SECTION OF UTERUS AND PLACENTA—
from a case of Porro's operation.

Lithog by W & A.K. Joh

transversely, and 1½ in. antero-posteriorly; through this we see the lower margin of the placenta. This represents the line of amputation of the uterus, which passes through the inferior uterine segment.

After an unsuccessful attempt had been made to inject the uterus with a ½ per cent. sol. of nitrate of silver, it was left undisturbed for six hours, then placed for some days in weak spirit, and finally in strong spirit.

A series of vertical mesial sections were made for naked-eye demonstration; these were cut with the hand, the uterus being embedded in paraffin.[1] Portions were also cut out of various parts, and specially hardened for microscopic examination.

(*a*.) NAKED-EYE SECTIONS.—One of these is represented in Plate I. (for line of section, see Fig. 1.) The drawing is accurate. The colour is taken from that of Prep. II., as the nitrate of silver has destroyed the natural colour. I may mention that in Plates III., IV., and VI., the colour of the mounted sections is as far as possible reproduced; by the method of hardening and mounting described above, I have succeeded in retaining so much of the natural colour that it seemed quite worth while to reproduce it in the Plates.

In Plate I. we see the anterior wall, the fundus, and the posterior wall of the uterus in section, with the placenta attached to the posterior wall and filling the uterine cavity. The lower portion of the anterior wall does not appear as it fell away after the vertical mesial section was made; it is indicated by a dotted line.

Measurements taken along a line passing antero-posteriorly through the junction of the upper and middle thirds of the placenta and uterus give the thickness of the structures to be the following: anterior wall, $1\frac{4}{16}$ in. (3·2 cm.)—of which the membranes form about $\frac{1}{8}$ in. (3 mm.); placenta, $\frac{7}{8}$ in. (2·2 cm.); posterior wall $\frac{9}{16}$ in. (1·4 cm.) The greater thickness of the anterior wall is probably due to its being allowed to contract more, from being cut through by the incision; the posterior is so far fixed by the placenta.

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[1] The best method of mounting such sections is to embed them between plates of glass with glycerine jelly. This is prepared as follows:—The gelatine is melted, clarified with white of egg, and, when almost cold, strained through flannel; glycerine is added in the proportion of two parts to one of gelatine; carbolic acid is dropped in, two min. to ℥i. of the mixture, to make it keep. I tried various proportions of glycerine and gelatine and other antiseptics, but found the above to answer best. The section may be laid in water to take the spirit out; if it is desired to keep the colour, or any matter which would wash away, it is best to mount it at once. A film of melted glycerine jelly is poured on one plate of glass; the preparation is laid upon this in the same way as a cover glass is laid on a section, which prevents air-bubbles from forming below it; a second film of the glycerine jelly is poured on the section, and the other plate of glass laid on with the same precautions. Four pieces of cork, of the same thickness as the preparation, are slipped in between the corners of the glass plates, and fixed with gelatine. The glass is allowed to stand till the sections and corks have become fixed. A double layer of gummed paper is run round three sides of the plates so as to hold them together. Warm glycerine-jelly is poured in at the side left open, till the space between the plates is completely filled, the end is then closed with gummed paper. A strip of calico is run round the whole margin, and this is covered with another layer of paper to give a smooth surface for the varnish.

The *Placenta* is attached to the posterior wall of the uterus. It is throughout its whole extent in close relation to the walls. On unmounted sections, it is evident that it is at no point very firmly attached, and certainly not more firmly attached at its margins than its centre; at the same time it is not free at any point. It measures vertically 5 in. (12·8 cm.); its thickness varies from $\frac{3}{4}$ (1·9 cm.) to $1\frac{1}{2}$ (3·8 cm.) in., being greatest opposite to the wound in the anterior wall where it has been free to bulge forwards. The area of its attachment is seen here to measure vertically $4\frac{1}{2}$ in. (11·5 cm.); in transverse sections, we find that it is transversely 4 in. (10·2 cm.)

The *Membranes* form a lining, about $\frac{1}{8}$ in. (·3 cm.) broad, to the anterior wall and fundus. Even to the naked eye, this lining appears as made up of two layers: a layer about $\frac{1}{16}$ in. (1·5 mm.) broad thrown into wavy folds, there being about eight wavelets to an inch; and a more delicate membrane passing along the crests of the waves, and sending down prolongations into the troughs. The umbilical cord has been bisected, and processes of Wharton's jelly are seen to extend into the placenta.

(*b*.) MICROSCOPIC SECTIONS.—Portions of the uterine wall were cut out of half a dozen different places, and specially hardened for microscopic examination. Instead of making a diagrammatic drawing based on several of these, two of the sections have been given in Plate II.; and I am indebted to Mr Tathan Thomson for the accuracy with which he has represented both the outline (as far as possible to scale) and the staining.

Plate II., Fig. 1., shows a portion of the uterine wall and membranes under a low power, and stained with eosin. Beginning at the free (internal) surface of the uterus we have first a deeply-stained line which represents the epithelium of the *Amnion*: beneath this is a layer of less deeply-stained tissue, part of which belongs to the amnion; while part lies in shreds between it and the chorion, which we have called the *Subamniotic layer*.[1] Below this is another faintly stained band which is everywhere closely applied to the decidua, and represents the whole (Friedländer and Langhans) or a part (Kölliker and Leopold) of the *Chorion*. The *Decidua* is thrown into a series of folds; it is evidently composed of a more superficial *compact* layer, and a

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[1] We have applied the term "subamniotic layer" to this tissue as indicating its position without implying its nature or origin. It has been called "membrana intermedia" and magma reticulé (Velpeau), and by German writers "gallertschicht;" so far as we know, there is no English term for it.

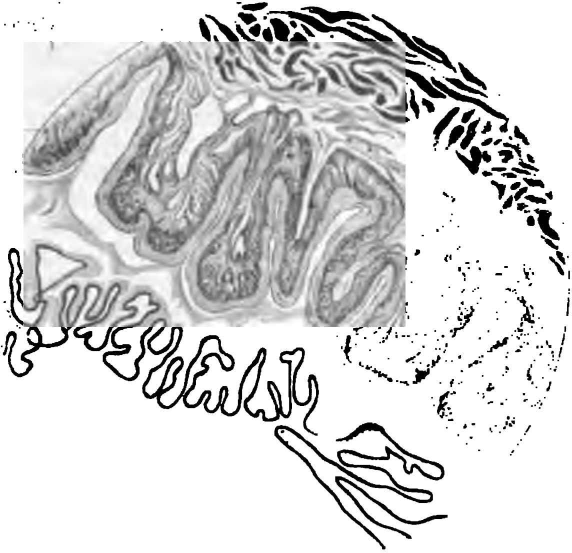

Fig. 1 [illegible]

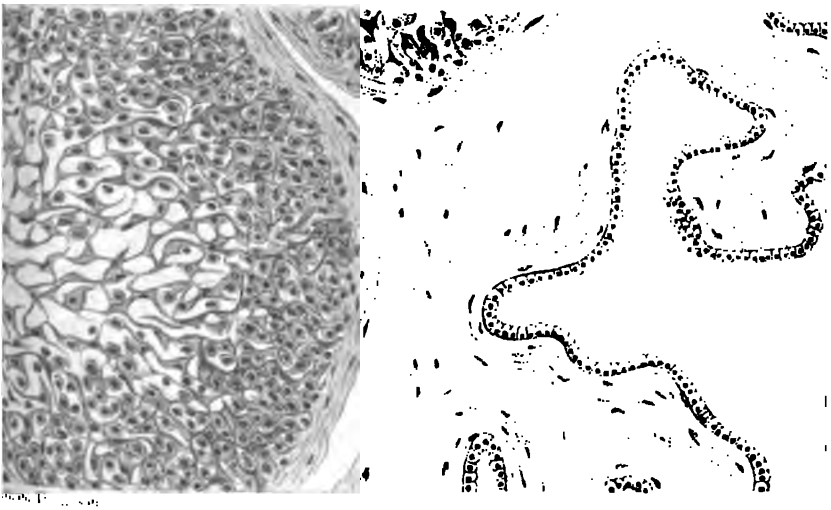

Fig. 2 (Stained Preparation [illegible])

MEMBRANES IN RELATION TO WALL OF UTERUS AFTER DELIVERY OF THE CHILD

[illegible]

deeper *spongy* layer.[1] This last is broken up into spaces which are most marked within the crests of the waves into which the decidua is thrown. The spongy layer rests on the *muscular wall* of the uterus.

From this section we learn that the membranes detach along two planes. (1.) The amnion separates itself through the subamniotic layer, and is thrown into a series of primary and secondary folds which produce an appearance of branching papillæ. That these papillæ are really due to an apposition of two layers of the amnion is apparent from the spaces which run up into them, and from the fact that they unfold on traction. These spaces (and the same holds good of the spaces below the decidua) are opened up by the mounting of the section. (2.) The chorion and decidua are separated through the spongy layer of the latter. They are thrown into broader and more regular folds, producing a wavy appearance. The decidua is detached at the crests of the waves, but is still attached at their troughs. The separation of the chorion and decidua, as the result of the diminution of area of the uterine wall, is not so complete as that of the amnion; this is probably due to the difference in the elasticity of the membranes.

Plate II., Fig. 2, shows another section from the same part of the uterus under a high power, and stained with picro-carmine. It was obtained by making a continuous drawing of two fields of the microscope. The epithelial cells of the *Amnion* are arranged in a single layer; when a papilla is cut obliquely, the appearance of several layers is produced, as seen in one part of the section. They are cylindrical,[2] have a large nucleus placed towards the bottom of the cell; the nucleus stains deeply with carmine, while the cell-substance takes on a decidedly yellow colour. It is noteworthy that they stain deeply with eosin, and stand out more than the decidual cells. This affinity for staining may point to activity of the protoplasm. The total thickness of the amnion is about ·002 in. (·05 mm.), of which the layer of cells forms ·0005 in. (·0125 mm.) The *Subamniotic layer*[3] is seen to consist of a mucous-looking tissue with flattened nuclei scattered through it.

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[1] The terms "compact" and "spongy" describe very well the naked-eye character of these layers. The term "glandular," introduced by Friedländer, suggests that the glands are restricted to the spongy layer, which is the case only in the later months of pregnancy. The term "cellular" is open to a similar objection. We think, also, that "superficial" and "deep" are preferable to "internal" and "external."

[2] Kölliker and others describe them as squamous, but A. Hotz (*Ueber das Epithel des Amnions*, Dresden, 1878) shows that the epithelium of the amnion at full time is cylindrical.

[3] Kölliker (*op. cit.*, s. 322) says that Schultze and Robin described this "gallert-schict" as composed of multiform stellate cells embedded in a mucoid tissue. As to its origin, Robin believes it to be, like the Whartonian jelly, a product of the allantois, and therefore belonging to the chorion. It might possibly be part of the amnion, or the product of wandering cells and transudation between chorion and amnion.

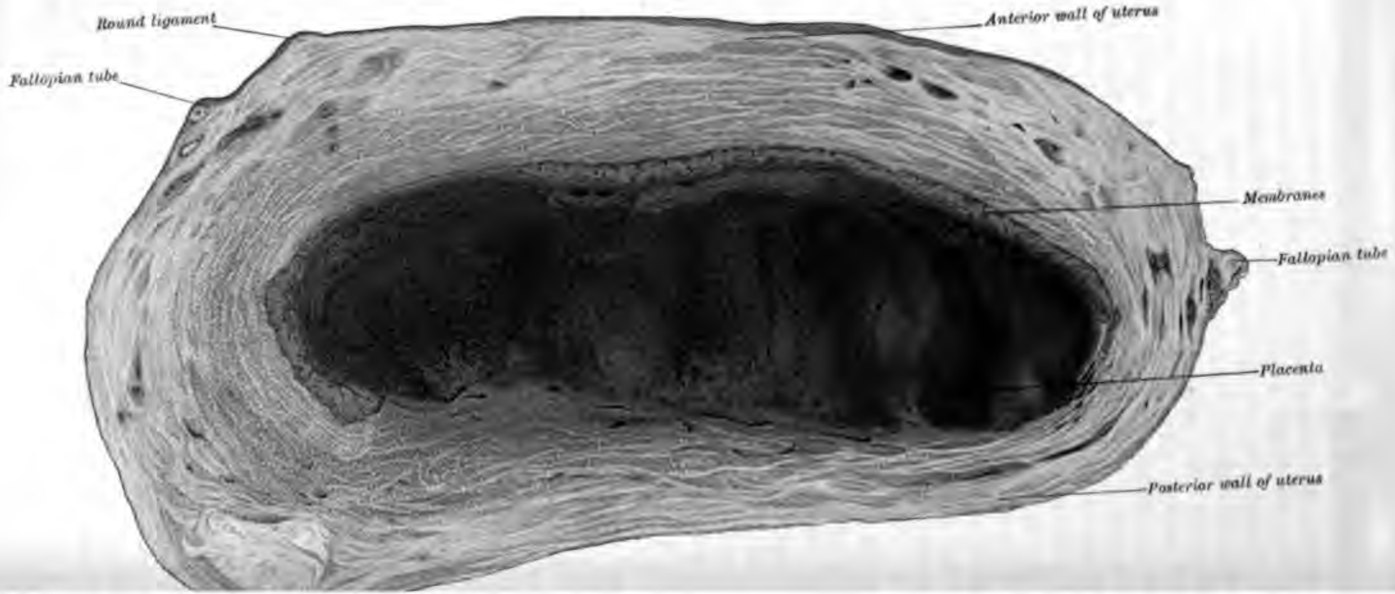
The *Chorion* appears as a layer of tissue which stains more of a brick-red hue, and passes imperceptibly into the decidua. It appears as a layer of nucleated fibrous tissue, about ·0013 in. (·03 mm.) thick, below which there are several layers of rounded cells which Friedländer, Kundrat, Engelmann, and Langhans refer to the decidua; Dohrn, Leopold, and Kölliker, describe them as belonging to the chorion because they can be traced into the chorion frondosum. In this particular section they pass imperceptibly into the cells of the decidua, and might easily be taken for a part of that membrane. But in other sections, especially where the reflexa can be distinguished, which cannot be done in this one, they are sharply marked off. This band of cells is ·002–·003 in. (·06–·09 mm.) broad, making the total breadth of the chorion about ·004 in. (·1 mm.) Here and there a faintly-stained, rounded space appears just below this layer; these were first noticed by Friedländer, and are said by Engelmann to be remains of the primitive villi. In the sections figured in Plate II. the *decidua reflexa* cannot be traced; in others it appears as a narrow layer of compressed cells beneath the chorion. The superficial *compact* layer of the *decidua vera* (characterized by the rounded, sometimes branching, decidual cells without the glandular spaces) is seen in the section Fig. 2, which stops short at the commencement of the *spongy* layer. The compact layer is about ·008 in. (·2 mm.) broad, and the spongy layer—where not opened out—about ·012 in. (·3 mm.); making the total thickness of decidua and chorion about ·024 in. (·6 mm.) The superficial or *compact layer* of the decidua and the commencement of the *spongy* layer are seen in the section. I have examined this spongy layer carefully in a large number of sections, and find that a few of the spaces (close to the muscular wall) have a defined lining, and in some of these the glandular epithelium is seen; the majority of the spaces seem to be produced by the tearing up of the tissue in the process of its being detached.

Sections taken from other parts of the uterus show a similar appearance; the extent to which the membranes are folded varies in different parts, being most marked over the fundus, and least on the anterior wall. Sections stained with osmic acid show *no fatty degeneration along the line of separation of the decidua.*

PREP. II.—*Uterus with Placenta* in situ, *and Membranes partially separated, from a case of Porro's Operation.*

The operation was performed by Professor Simpson, on account of a large fibroid tumour of the cervix and lower uterine segment; the patient was at full time, and had been in labour for 24 hours; the os was expanded, but the membranes had not ruptured; a ligature was thrown round the lower uterine segment before the incision was made in the uterus; on making it, very little blood flowed; the membranes were partially drawn out as the child was extracted. The uterus was put in equal parts spirit and water

PLATE III.


Round ligament
Fallopian tube
Anterior wall of uterus
Membranes
Fallopian tube
Placenta
Posterior wall of uterus

after the operation, and though it was lifted out for examination, it was not manipulated or cut in any way.

In the fresh preparation the following points were noted. The incision for the extraction of the child (indicated by dotted line in Fig. 2) is over the anterior half of the fundus and upper third of the anterior uterine wall—not limited to the anterior wall as in the former case; the cord and a portion of the membranes protrude from it; the upper half of the fœtal aspect of the placenta is exposed in it, but the border of the placenta has not been incised. The amputation wound is uneven, being higher up on the anterior wall, on account of the tumour; the lower margin of the placenta is not seen through it.

After 36 hours, the uterus was put in strong spirit, so that naked-eye sections might be made. As these had been made vertically in the first preparation, they were made transversely here; the preservation of a considerable part of the anterior wall allowed of this.

(*a.*) NAKED-EYE SECTIONS.—Plate III. gives a faithful representation of one of these, both as regards drawing and colour. The section passes through both walls of the uterus (along the dotted line marked II in Fig. 2); the placenta is divided about 1 in. below the insertion of the cord, which is central. In Plate III. we see that the form of the section is ovoid, and has the following measurements in inches:—Vertically—anterior uterine wall ⅞, placenta 1¼, posterior wall ⅝; transversely—right lateral wall 1, placenta 4¼, left lateral wall ½. The anterior wall, in the left half of the section, is broader than the posterior; in the right half, the posterior and right lateral walls are hypertrophied, due to the presence of a small fibroid tumour. The origin of the round ligaments and the Fallopian tubes are seen in section. Numerous large veins have been divided in the posterior wall, and especially underneath the placenta; in the anterior wall, there are a few veins superficial.

The *Placenta* is attached to the posterior wall, and is 4¼ in. (10·8 cm.) broad, and 1¼ in. (3·2 cm.) thick. It is in relation for 4 in. (10·2 cm.) to the uterine wall, from which it is at no point free. An examination of loose sections cut in other directions shows these additional points:—The area of placental attachment measures vertically 4½ in. (11·5 cm.); although the closeness of the attachment varies, some lobules being more loosely attached than others, the placenta is at no point entirely separated from the uterine wall.

The *Membranes* are seen folded inside the side walls and middle part of the anterior wall. There is no space between the placenta and the anterior uterine wall, and no blood-clot.

(*b.*) MICROSCOPIC EXAMINATION.—This shows that the amnion has been in great part removed; the chorion and decidua are present in some parts of the uterus, and absent in others. When present, we have a similar condition to that figured in Plate II. They are thrown into wavy folds, and are being detached in the plane of the spongy layer.

Let us now compare Preps. I. and II., and see what information they give us as to the anatomical changes in the uterus during the third stage; and we shall look at (1) the placenta, (2) the membranes, and (3) the so-called uterine cavity.

1. THE PLACENTA.—In both cases the area of placental attachment has, after evacuation of the child and liquor amnii, contracted to about the same extent, viz., 4½ in. (11·5 cm.) vertically, and 4 in. (10·2) transversely. In neither case has the placenta become separated. With regard to the first case it might have been urged that the patient had not been in labour, or, at least, that the uterus had not been allowed to go on contracting as long and as forcibly as in a normal labour. Hence I was anxious to see the condition of the placenta in the second one in which, as already said, strong contractions had been present for 24 hours; in it the placenta was still attached.

Theoretically there are three ways in which the separation of the placenta might occur: (1.) It might be separated, as the result of alteration in the size of the placental site, produced by a wave of contraction, or by the escape of the liquor amnii and fœtus; (2.) It might be shelled off by effusion of blood or serum in the placental site; (3.) It might be detached by the uterus contracting on it, and endeavouring to expel it as a foreign body. These preparations inform us that diminution of the placental site does not separate the placenta; they also show us that retro-placental hæmorrhage has not occurred. They point to the third as the chief factor in the detachment of the placenta, viz., *that the uterus contracts on it, and detaches it as a foreign body.*

2. THE MEMBRANES.—As the result of the diminution in area of the interior surface of the uterus, the membranes are thrown into folds. *The amnion separates in great part from the chorion*, and is thrown into a series of primary and secondary folds, producing an appearance of branching papillæ; there is no effusion of blood below the amnion. The *chorion* and *decidua* are thrown into broader and more regular folds, producing a wavy appearance. *The superficial or compact layer of the decidua is unbroken, but the deeper spongy layer is broken up into spaces which correspond to the inner surface of the crests of the waves; there is no indication of effused blood in these spaces.*

3. THE SO-CALLED UTERINE CAVITY.—After the fœtus has been expelled, we are liable to think of the uterus as an empty cavity, and this gives rise to erroneous deductions; thus Ahlfeld speaks of the placenta as bulging into the uterine cavity. Plate III. gives us a more correct conception of the condition. The anterior uterine wall rests on the placenta just as the posterior one does;

if the placenta were made to bulge, it would press the posterior wall back as much as it pressed the anterior one forwards. *The placenta is thus surrounded on all sides by a resistance which is equal, except along one line,* viz., that running through the plane of contact of the anterior and posterior walls of the lower uterine segment below the placenta. When the placenta is attached to the anterior or posterior wall, this diminished resistance affects only its inferior border in the first instance, which may bulge accordingly. When the placenta is attached over the fundus, it might cause a bulging of the central portion of the placenta, and lead to the formation of a retro-placental effusion, although, until a uterus from a case of *normal* labour with the placenta in it shows this effusion to be present, we have no anatomical basis to rest on. It is also important to note that at this stage there is no blood-clot in the potential uterine cavity.

(*To be continued.*)

Part Second.

REVIEWS.

The Refraction of the Eye: A Manual for Students. By GUSTAVUS HARTRIDGE, F.R.C.S. London: J. & A. Churchill.

A SHORT elementary and practical treatise on the diagnosis and optical correction of the anomalies of refraction of the eye was an undoubted desideratum until the appearance a few years ago of Mr Morton's little book. This contained useful practical hints, as well as a clear exposition of the methods of objective and subjective diagnosis, both in the text and in well-arranged tables admirably suited for reference after perusal of the text. Some explanations were also given in it of the optical signs indicative of errors of refraction, and for the first time in an English text-book there was a good chapter on retinoscopy. The fact that Mr Morton's book should be so soon followed by another extremely elementary treatise on the same subject shows that a wide interest is now shown in this department of ophthalmology. Mr Hartridge's book is an excellent one, and cannot fail to be of great service to beginners, as it is copiously supplied with figures which, in most cases, add greatly to the clearness of the text. There is an introductory chapter on Optics, which we think the author has made too elementary. Surely the second law of refraction might have been fully and accurately given without assuming any knowledge of mathematics, instead of being dismissed in the following sentence: "The amount of refraction is the same for any medium at the same obliquity, and is called the index of refraction." In the next chapter on Refraction, Accommodation, and Convergence, Nagel's metre angle notation for the degree of convergence is very properly introduced, but it is a pity that the curves of relative convergence (Fusionsbreite) are not inserted.[1] They form an interesting counterpart to the Donder's curves of relative accommodation. The student is apt to be misled in his ideas of the degree of independence of convergence and accommodation if he pays attention only to the following sentence: "Although accommodation and convergence are thus intimately linked together, it can easily be proved that they may have a separate and independent action. If we suspend the accommodation with atropine the convergence is not interfered with, and if by division of both internal recti for squint the power of convergence is for the time lost, the accommodation can still be brought into play." Although convergence is not impeded when the accommodation is paralyzed by atropine, there remains the impulse to accommodation by which the connection remains undisturbed, and in the same way, after division of the tendinous insertions of the internal recti, there is as great an effort made to converge when a certain amount of accommodation is brought into play as before; this is shown by the movements taking place to the extent to which the remaining muscular insertions permit of. Accuracy and clearness are sacrificed to a desire to simplify and shorten descriptions in such sentences as the following: "The near point recedes as age advances, but should not be further off than 22 ctm." "Infinity is any distance beyond 6 metres, the rays coming from a point at or beyond that distance being parallel, or nearly so." In Chapter III., on the Methods of Determining Errors of Refraction, the author has introduced Morton's figures, showing the reason why a more or less distinct image of the fundus is obtained with the ophthalmoscopic mirror alone in hypermetropia and myopia, but not in emmetropia. He also gives figures illustrating the changes in size of the image of any portion of the fundus in hypermetropia, as the lens between the ophthalmoscope and the eye is withdrawn from or approached to the eye. It is a pity that similar figures have not been given for the case of myopia, which is a little more complicated and not so easily understood. There is not even an explanation given in the text for why the image on withdrawing the lens should increase in size, nor is any mention made of the appearances when the lens is situated on the observer's side of the inverted aerial image in high degrees of myopia. In the following sentence referring to the ordinary subjective test for myopia, the word weakest should have been inserted and underlined between "note the" and "glass." "If the myopia be of high degree, then probably no glass will enable him to read $\frac{6}{6}$, and we note the glass with which he gets the greatest acuteness of vision." This is a most important practical point which has evidently only been omitted by accident, as it is distinctly stated for myopia with normal vision. At p. 46 the author remarks, " Landolt says that if glasses, which are to correct the ametropia, be placed 13 mm. in front of the cornea, the retinal image of the ametrope should be of the same size as that of the emmetrope." This, of course, refers to axial ametropia, and it might have been explained that it is owing to the corresponding displacement of the second nodal point. It was first, we believe, pointed out by Girand-Teulon in 1869. The estimation of the amount of refraction by means of the direct examination with the ophthalmoscope is very satisfactory in the lower degrees of ametropia, and with practice can be effected with very great accuracy, possibly, as some assert, to within half a dioptre. In higher degrees this amount of accuracy is impossible, owing to the relatively great difference in the glass required for correction, according to the distance separating the eyes of the observer and the patient, and not, as Mr Hartridge thinks, p. 59, because this method "requires much greater practice than any other method of examination; probably many observers can never relax their accommodation so completely as to give satisfactory results." Chap. IV. gives a good description of Retinoscopy. Chap. V. is devoted to a more exhaustive account of Hypermetropia. The correction of the manifest hypermetropia alone is very wisely advocated. On p. 100 it is remarked that " the disadvantage of using spectacles constantly is that after wearing them for some time the patient finds he is unable to see without them, which is a serious inconvenience, so that the plan is not to give spectacles for constant use until the hypermetropia has become relative or absolute." This is a good rule, if by relative is meant that without constantly wearing the correcting spectacles the accommodative asthenopia continues to annoy the patient. Mr Hartridge is one of those who firmly believes in the connection between conjunctivitis and even granular lids, and uncorrected hypermetropia. Chaps. VI. and VII. are on Myopia and Astigmatism respectively. Snellen's new subjective test for astigmatism we have found by far the most practical; it is a pity there is no figure given of it alongside of those at p. 133. Chap. VIII. is on Presbyopia, and this, along with Chap. XI. on Spectacles, in which a few sound general rules are given as to the different kinds of spectacles as well as a number of cases of different states of refraction, concludes the strictly optical part of the book. Chap. IX. on Strabismus is, no doubt, introduced on account of the more or less intimate connection of many forms with errors of refraction. Though very short, and therefore necessarily incomplete, it forms a good introduction to the study of muscular anomalies. Chap. X., on Asthenopia, is somewhat behind the times. On the whole, Mr Hartridge has produced a most acceptable. book, the general excellence of which suffers but little from the slight inaccuracies and want of completeness which are to be found here and there, and which will, no doubt, be improved on in a second edition.

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[1] *Vide* Nagel, *Mittheil. aus Tübingen*, vol. i., and *Græfe-Sæmisch Handbook*, vol. vi. pt. 2.

On Flat-foot and its Cure by Operation. By ALEXANDER OGSTON, M.D., Professor of Surgery in the University of Aberdeen.

IN introducing the subject of this pamphlet we are told by the author that "Lister's antiseptic method has placed in our hands modes of remedying surgical deformities that would formerly have been regarded as unjustifiable." With this statement we cannot but agree. At the same time we feel that there is a danger of performing unnecessary operations, which are not free from risk in unpractised and untrained hands. Though it is somewhat anticipating what we desire to prove, we must say that the operation at present under consideration comes within the range of those which may be performed too often and too rashly under the protection of Listerian dressings.

Professor Ogston gives us at the outset a full and clear account of what flat-foot is. "Flat-foot, or pes valgus acquisitus, is, like scoliosis and knock-knee, almost invariably the result of a disproportion between the strength of the foot and the work it has to accomplish. . . . The flattening of the arch of the foot is the test of the existence of flat-foot, and the condition is better designated by the term flat-foot, or pes planus, not unfrequently bestowed upon it, than by the name of pes valgus, or everted foot, that it oftener bears. The name pes valgus is misleading. The valgus or everted posture is not necessarily characteristic, as it includes another and different condition, which is, I think, generally confounded with it. This condition is that of everted or valgus ankle. Valgus ankle is usually seen in young girls passing out of childhood, and is sometimes temporary, sometimes permanent. The ankle, especially when seen from behind, is observed to have lost its straight form and to fall inwards, so that the malleoli approach the middle line and constitute a 'knock-ankle.' . . . In true flat-foot, on the contrary, the ankle-joint can hardly be said to participate. The arch of the foot suffers, and the bones, tendons, and ligaments that maintain the shape of the instep are so modified that the arch unfolds, its two extremities recede from one another, and its curve finally becomes a straight line, touching the ground along its whole length."

We have next a description of the condition of the joints of the foot affected, and the diagnosis by palpation. We are told that examination of the foot demonstrates "a slight laxity of all its articulations," but principally that "between the scaphoid and the head of the astragalus." The laxness of all the joints, and especially of the astragalo-scaphoid, is generally very evident in cases of flat-foot. For if pressure upwards be made on the ball of the great toe in such persons, it will readily rise till the inner margin of the foot becomes a straight line.

The great mobility of "Chopart's joint," as Professor Ogston calls it, is easily made out by direct manipulation. Of this there is no doubt. But we cannot agree with the author in taking for granted that because the astragalo-scaphoid joint is the most mobile, that therefore its anchylosis will cure flat-foot, which is the argument and centre point of his whole essay.

Next, Professor Ogston gives a clear account of the stages and changes through which the foot goes in this disease. At first the lax and plastic foot can be made easily to assume (under manipulation) the normal arched, or the abnormal flattened condition. After a while, however, the flattened state, which prevails when the patient puts weight on the foot, becomes permanent. This is explained by Professor Ogston as being due, not only to the altered position, but to an alteration in the shape of the bones, especially of the astragalus. And this alteration makes reduction by manipulation or apparatus impossible in aggravated cases.

"In the extreme dorsal flexion of the astragalo-scaphoid joint present in flat-foot, the caput tali is no longer so much covered below by the scaphoid as it normally is, but escapes from it downwards and inwards, so that it finally forms on the inner side of the sole a prominence greatly exceeding in size that of the tuberosity of the scaphoid. The articular surface of the scaphoid is altered in direction, so that it looks more downwards, and tends to forsake its contact with the caput tali. There would be an actual gap between the bones below did not the astragalus accommodate itself to the void and assume an angular form with two facets nearly at right angles to each other, one looking forwards and articulating with the scaphoid, and the other looking downwards to the ground, parallel to it and resting on the inferior calcaneo-scaphoid ligament.

"So soon as the altered shape of the astragalus head becomes pronounced the deformity ceases to be easily reducible, and it shortly comes to pass that it offers an insuperable obstacle to the reduction; the foot is henceforth fixed, because the prominent angle cannot be made to ascend behind the scaphoid, since it locks upon it with every attempt at plantar flexion."

On the ground of this alteration in the shape of the astragalus Professor Ogston has devised his operation, which we shall not describe, as it has been already given at length in the Surgical Periscope for March of this Journal; we shall merely state that the operation is for the purpose of securing anchylosis of the astragalo-scaphoid joint in a good and normal position, after the removal of a sufficient quantity of cartilage and bone.

We wish now to draw attention to some omissions in the paper. At page 2, Professor Ogston tells us that flat-foot occurs "seldom save in those who are over-worked." With this statement we do not agree. The condition of flat-foot to a minor extent is very common, and occurs in persons of all ages and occupations. But those who complain of it and who seek for relief are certainly the heavy worked. We have been in the habit of noting three varieties of flat-foot according to cause. Cases due to general relaxation of the parts from weakness of ligaments, fasciæ, and tendons, connected with a general weakness and debility. Secondly, cases due to the carrying of weights and long standing in the erect position, in which, as it were, the constant pressure of the weight of the body and its extra load transmitted through the tibia to the astragalus, drives the latter down from its normal position. The third class of cases is the gouty. Flat-foot is very common in these last, and is, we believe, due largely to a tenderness of the metatarso-phalangeal joints, which makes the person walk on his heels, and thus, from not exercising the foot and the flexors of the toes, relaxation of the whole foot takes place, and flat-foot is the result. Now, the practical use which we would make of these distinctions is that in class 2 the "Chopart joint" will undoubtedly be most to blame, but in classes 1 and 3 all the joints along the inner margin of the foot will be to blame, and consequently anchylosis of the astragalo-scaphoid joint will have no beneficial effect on the patient's powers of walking. Another point which we consider Professor Ogston has allowed to escape him is that the foot, in the disease we are considering, is flattened not only antero-posteriorly (that is, from toe to heel), but laterally. In other words, the lateral arch of the foot gives way. Hence, to a considerable extent, the apparent valgus condition of the foot in aggravated cases. Again we ask, What good will anchylosis of the astragalo-scaphoid joint do to such a state of matters? It could not in any way improve the lateral flattening of the foot.

Without going any further in the criticism of Professor Ogston's operation, we would submit that, while there doubtless will be cases in which the relaxation of the astragalo-scaphoid joint is evidently the main, and almost sole cause of flattening of the tarsus, and in which the operation of pegging the two bones will be not only justifiable but appropriate, there are many more cases in which other treatment should be adopted. The pegging operation will be most appropriate in those cases which are due to direct pressure on the astragalus from carrying weights and long standing. In cases due to general debility and relaxation, some mechanical support combined with certain gymnastic exercises will, we believe, be found more suitable.

The best mechanical support we have seen is the one figured below, the invention of Mr Young, cutler, Edinburgh. A broad leather strap is attached to the outer side of the sole of the boot, passes beneath the instep upwards to the outer side of the leg, where it is attached to an upright iron bar. In this way the instep is not only supported but also drawn outwards. The tendency of the tarsus to fall inwards as well as downwards is thus counteracted. A further advantage of this boot is that it supports the tarsus only when the patient is in the upright position. There is a joint where the iron rod is attached to the sole of the boot. When the ankle is flexed the rod comes forward, and the leather strap is relaxed. This allows, during walking, of the natural exercise of the patient's muscles, tendons, ligaments, etc., which are thus prevented from undergoing atrophy.

Such exercise (or gymnastics as we have called them) must be of great importance in those cases in which flat-foot is due to debility. If the muscles are relaxed, there will be the more strain on the ligaments. If, on the other hand, the muscles be trained so as to be in better tone, they will support and help the ligaments, and enable them to recover their tone. One can readily see how the tibialis anticus and posticus with the flexors of the toes will assist the calcaneo-scaphoid ligament and plantar fascia to maintain the antero-posterior arch, and how the peroneus longus especially will assist the lateral arch of the foot.

While heartily accepting Professor Ogston's valuable contribution to the surgery of the foot, we would suggest for his consideration, as more generally applicable, the elementary procedures we have indicated above.

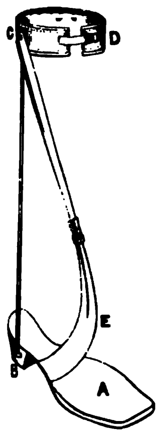

FIG. 1.

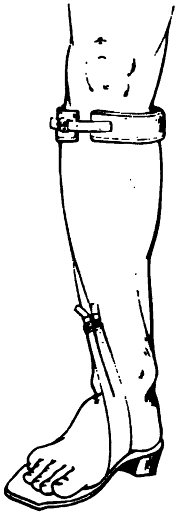

FIG. 2.

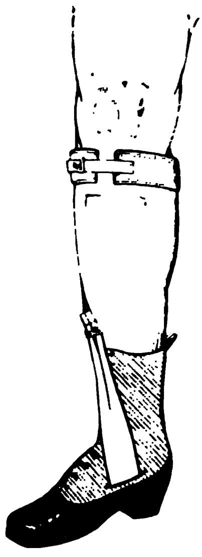

FIG. 3.

FIG. 1.—Diagram showing principle of apparatus.

A, Boot with upper removed.

B, Lower end of steel support entering box in heel of boot, and passing upwards on outside of leg to below knee at C, and secured in position by band D going round leg.

E, Leather strap passing below arch of foot from outer edge of sole, and pulling upwards on upper end of steel rod at C.

FIG. 2.—Apparatus with strap drawing up arch of foot.

FIG. 3.—The appliance as in use. The foot strap is seen having passed below arch, coming through upper, and passing across front of leg to upper end of steel support. By the strap passing through upper, interference with its free action by the lacing of the boot is avoided.

The Fold of the Nates. By J. SYMINGTON, F.R.C.S.E., Lecturer on Anatomy, School of Medicine, Edinburgh. From the *Journal of Anatomy and Physiology.*

MR SYMINGTON is well known as a painstaking and accurate investigator. In the present instance he begins by pointing out that almost all writers on anatomy and surgical anatomy describe the fold of the nates as corresponding to the lower margin of the gluteus maximus. In the second place, Mr Symington has no difficulty in showing that these two anatomical lines do not correspond. This he proves by reference to drawings from foreign authors, and by his own observations on the dead body. The third point in this paper is the cause of the natal fold and of its diminution or loss in cases of disease of the hip joint. Mr Symington attributes the fold to the ischial tuberosity and relaxation of the skin in the straight position of the limb. "The skin which is put upon the stretch in flection of the thigh is relaxed in the extended condition, and thus a fold naturally tends to occur below the projecting ischial tuberosity." Mr Symington quotes also Luschka's opinion, who "considers the fold due to a pad of fat and bands of connective tissue which pass from the skin through the fat to the ischial tuberosity and fascia lata." The decrease of the natal fold in hip-joint disease is explained by Mr Symington "to be dependent upon the flexed position of the limb." We have reason to believe that he has somewhat altered this opinion since the publication of the above papers. It is wonderful that so plain an anatomical fact as the non-correspondence of the gluteal margin and the natal fold should have been overlooked. It is doubtless one of those things that have got into books and remained there, simply because no one has thought it worth while to investigate the truth. Authors have simply taken the thing for granted, and copied the statement from generation to generation. One of the most recent publications (Treves' *Surgical Applied Anatomy*), otherwise a most excellent and reliable authority, says (page 381), "The fold of the buttock corresponds to the lower border of the gluteus maximus."

Part Third.

MEETINGS OF SOCIETIES.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

SESSION LXIII.—MEETING IX.

Wednesday, 2nd July 1884.—Dr LITTLEJOHN, *President, in the Chair.*

I. EXHIBITION OF INSTRUMENTS.

Dr A. Bruce showed a new form of portable GALVANIC BATTERY. The box (Fig. 1) measures 7¾ inches long, 5 inches broad, by 4¾

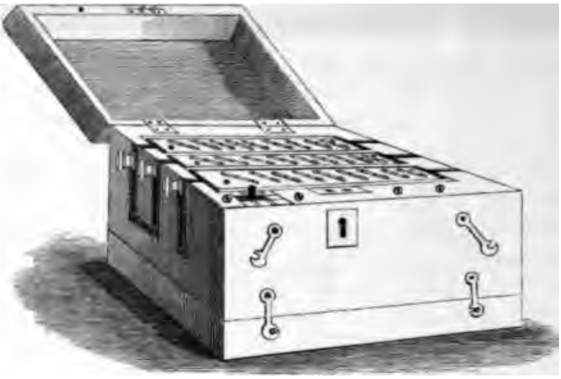

FIG 1.

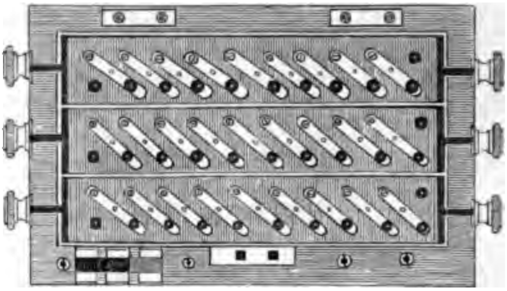

FIG. 2.

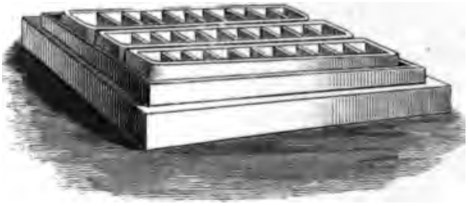

FIG. 3.

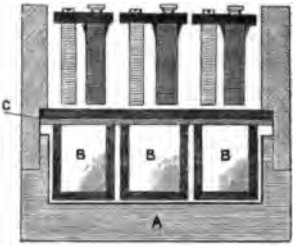

FIG. 4.

DR A. BRUCE'S NEW FORM OF PORTABLE GALVANIC BATTERY.

inches deep, and with its contents weighs only 4½ pounds. The box consists of two parts, an upper and a lower (Figs. 1 and 4), of which the lower contains the cells (Figs. 3 and 4), and the upper (Figs. 1, 2, and 4) the elements. The cells (Fig. 3, and seen in antero-posterior section in A, Fig. 4) consist of three vulcanite trays, each containing ten compartments. The depth of each compartment is 1¼ inches, its width ½ inch, and its breadth 1 inch; the thickness of its wall ⅛ inch. These three trays are placed side by side, as in Fig. 3, in the lower segment of the box, the whole interior of which is coated with a waterproof cement to prevent injury to the wood from any accidental spilling of the liquid. When the battery is not in use the cells are completely closed by a plate of vulcanite, to the under surface of which is fixed a sheet of vulcanized rubber, sufficiently soft to be pressed into the cells when the box is shut. It is kept in position by the pressure of the projecting part of the wall of the upper segment of the box (see Fig. 4), and so close is its apposition to the cells that the box may be thrown about in any way without the escape of a drop of fluid from the cells. The elements, zinc and carbon (Fig. 4), measure 1⅛ inches long by ¼ inch square. They are attached to three vulcanite bars (Fig. 2, where they are seen from above) by means of screws. When broken or worn they can be easily replaced by others. The zinc of one cell is connected to the carbon of its neighbour by means of a strip of brass (seen unshaded in Fig. 2), in the centre of which is a round aperture into which the brass plug of the "collector" fits. From each extremity of each vulcanite bar a brass limb passes through a slit in the end of the box (Fig. 1). By means of screws on these brass limbs the vulcanite bars can be raised, lowered, and fixed in any position. The sides of the slits at the end of the box are guarded by brass plates, which serve the double purpose of strengthening the woodwork of the box and of making connexion between the elements of adjacent rows of cells. The accessories, wires, electrodes, handles, etc., are carried in the lid (not shown in Fig. 1). A commutator is placed in the front wall of the box (Fig. 1, to left of lock). The fluid used is—

Water, . .	150 parts.
Bichromate of potash,	10 „
Bisulphate of mercury,	10 „
Sulphuric acid, .	5–15 „

From one to two drachms in each cell will be found sufficient for use, and will last for several applications of the battery. When it is used up it must be thrown away and replaced by fresh fluid. If the battery is not in constant use it is advisable to throw out the fluid and let the cells stand empty. It will be found that for ordinary use from seven to ten cells are sufficient. To sum up, the battery is very portable; there is no danger of fluid being spilt during transport; it is very simple. Every part can be readily inspected, any flaw detected and repaired by the owner of the battery with the greatest ease.

II. EXHIBITION OF PATHOLOGICAL SPECIMENS.

1. *Dr Claud Muirhead* showed (*a*) the BRAIN OF A PATIENT WHO SUFFERED FROM APHASIA AND LEFT-SIDED HEMIPLEGIA WITH LESION ON THE RIGHT SIDE; (*b*) the HEART of the same patient. In the heart the mitral orifice was greatly contracted. There was in addition a thrombus in the left auricle as large as a pigeon's egg, and laminated, attached by a pedicle, so that it hung tolerably free in the auricle. The right heart was greatly hypertrophied. The pulmonary artery was atheromatous throughout to its minutest branches. During the course of the illness there developed a curious murmur, peculiarly harsh, rough, and grating, and at times musical. This was evidently due to a rupture of a segment of the valve, or of one of the chordæ tendineæ, or to some fibrinous deposit on the valve. It turned out that the whole orifice was over-laid by three tongues of lymph on the auricular surface. The murmur was thus produced by the regurgitating stream throwing these tongues into vibration. When getting out of bed one day the patient suddenly fell down unconscious. He became aphasic and hemiplegic. An embolism had been carried to the brain. The peculiarity was that the hemiplegia was on the LEFT side of the body. This was all the more unusual, as the man had always been right-handed. He practically recovered his speech, the hemiplegia disappeared in great part; but he developed a weakening of intellect, and ultimately died. On examination post-mortem the RIGHT side of the brain was found to be much softened. The embolism had been carried into a branch of the right middle cerebral artery. The softening that occurred was well shown in the sections made.

2. *Mr A. G. Miller* showed PORTIONS OF THREE RIBS removed to favour contraction after empyema. Contraction had stopped after going on to a certain extent. The ribs were found to be closely in contact with each other. It was therefore thought advisable to resect portions to admit of further contraction. The parts removed were greatly thickened on their inner surface. The empyema had caused a sufficient amount of periosteal irritation to lead to the development of new bone. He would like to ask if any example of this had been met with in cases of long standing empyema. After the resection contraction went on rapidly, the cavity being reduced to one fourth or fifth of what it had been previously.

3. *The President* showed (*a*) a RUPTURE OF THE DIAPHRAGM and rupture of the heart from the body of a woman æt. 70, who had fallen a height of from 50 to 60 feet. The cardiac end of the

stomach was found in the thoracic cavity, having formed a hernia through the rupture in the diaphragm. The heart was ruptured at the base, the usual spot where this injury occurred in falls from a height. It was curious to have this case following so closely on a similar one he had shown at the previous meeting. How the old woman had chanced to fall was not known. She was said to have been given to somnambulism, but of that they did not have distinct proof. She had, however, been greatly struck by the suicide of the previous month. (*b*), The parts from a case of suicidal CUT-THROAT, with the instrument by means of which the injury was inflicted. The case occurred in the person of a gentleman who had been affected by insanity and showed suicidal tendencies. He appeared to get better. One day he left the room during dinner. He was followed, but before he could be intercepted, had made his way to a part of the house where some work was going on, and cut his throat with an ordinary joiner's saw which had been left with some other tools by the workmen. Tracheotomy was performed. He lived two days. The case was interesting from the unusual nature of the instrument.

III. ORIGINAL COMMUNICATIONS.

1. *Dr G. A. Gibson* read his paper ON THE EARLY STAGES OF TUBERCULOSIS, which appears at page 208 of this Journal.

The President said that, as far as he knew, they did not find any proclivity to phthisis in those who worked in chemical manures. It might be that the fumes of sulphurous acid, which was so much used, had a protective effect. As to the curability of tubercular phthisis, he could only say that the bodies he opened in the public mortuary which did not present some evidence of a previous phthisical attack were few indeed.

Dr Muirhead thought the whole question in the case presented by Dr Gibson was one of diagnosis. Whether it was truly a case of tuberculosis or not was one for consideration. The point, however, which Dr Gibson wished to dwell on was the curability of acute tuberculosis at an early stage. He himself had always had a belief that cure was possible even at a further advanced stage of tuberculosis; but as his views differed from those generally held, he had hesitated to push them. He thought the cure was to be obtained by the free use of iodide of potassium, which drug he considered had been of distinct benefit in some cases under his care.

Dr Ireland said that as men grew older their views perhaps became more sombre; but he and his fellows under Hughes Bennett certainly began their careers with much brighter hopes than those of their young friend Dr Gibson. He thought that consumption and tuberculosis were curable at the outset and in the early stages. Twelve years ago he paid great attention to chest diseases, and went to Madeira for some time, and saw many cases of consumption there. He could recall four cases at least where the disease must have been more advanced than in the case described by Gibson. They were cases in the second stage, in which some destruction of lung had occurred, but the disease had been completely arrested. Their young friend had taken too desponding a view to commence with, but he hoped to see him have brighter hopes as he grew older.

Dr Woodhead mentioned that, along with Dr Gibson, he had endeavoured to collect the breath in this case to examine it for bacilli. They had not adopted the ordinary method of making the patient use a respirator of gun-cotton, but asked him to breathe through a tube into two sterilized flasks, one containing serum, the other gelatine. The results were negative, but the method was not good.

Dr Byrom Bramwell would like to express the pleasure with which he had listened to this ably recorded case. Dr Gibson had advanced the proposition that tubercular phthisis was curable, a point on which Bennett had insisted long ago. But the real point of importance was, when they had a patient in the early stages of tuberculosis, could they say that they could cure him. He thought they could do so yet. Post-mortem examinations showed that tubercular phthisis was a curable disease; but he would be a bold man who would say, after having made a diagnosis of early phthisis, that the patient would get better. Some patients died in spite of the best possible form of treatment. With regard to the point mooted by Dr Muirhead, the curability of general tuberculosis, there were certainly some cases of this affection that were curable. He had himself seen recovery in several instances from tubercular meningitis. Dr M'Call Anderson had also recorded several illustrations of cure of tubercular peritonitis.

Dr Carmichael would like to inform Dr Gibson that he had seen a good many times a very similar clinical history in the child. The same question occurred to him whether they were cases of incipient tuberculosis cured. The difficulty was to prove whether they were dealing with tuberculosis or not. He had seen and had records of cases very similar in which the child was cured. One case occurred last winter. The temperature was very high. There were no physical signs whatever, but there was the peculiar form of pyrexia met with in tuberculosis. So far as he knew, the child was still alive. The question was a difficult one to consider, but he hoped it would be solved by further investigation.

Dr Gibson returned thanks to the President and other members who had made remarks on his paper. He agreed with Dr Muirhead as to the difficulties met with in diagnosing early stages of tuberculosis, and was happy to know that Dr Muirhead held such hopeful views as to the curability of the disease. He feared that their *old* friend Dr Ireland was but imperfectly acquainted with recent progress in regard to phthisis and tuberculosis, to the latter of which alone the paper referred. He wished especially to thank Dr Woodhead for his assistance and for his remarks.

2. *Mr Chiene* read his paper on GERMS AND THE SPRAY, which appeared at page 108 of this Journal.

Dr Duncan said it was necessary that he should make some observations upon a paper founded on some experiments he had made a year and a half ago, and on which he had founded, as a quasi-scientific basis, the change in practice he afterwards brought before the Society, and the results of which were known to most of the members. Mr Chiene had been good enough, a few days ago, to inform him of his experiments, and he had intended to have gone to witness them, but engagements out of town had prevented. He had not even had time to study the details of his own experiments. Comparing Mr Chiene's experiments with his own, the conclusion that one would naturally come to was that one or other must be absolutely right, and in that case that the probability would lie with the positive evidence. There were sources of fallacy in regard to the negative evidence which did not lie in the positive. Certainly had his results turned out with an amount of non-putrescence amounting to 95 per cent., he should have regarded this as a triumph for the spray. But there were some points in those experiments worth noting. The first point was with reference to those beakers which were not under the spray. They would see, in comparing Mr Chiene's results with his, that of those which he had not put under the spray 58 per cent. remained free from putrescence, but of Mr Chiene's only 5 per cent. remained free. His own number was made up largely of small beakers. All the large ones went wrong. It was a remarkable fact that a very much larger proportion of those not exposed to the spray remained clear with him than with Mr Chiene. Looking to that point, he should claim that the manipulative skill of himself and those engaged with him was, at all events, sufficient for protective purposes. The personal equation might therefore be eliminated. What further conclusion was to come therefrom? Taking it for granted that their experiments were both to be looked on as correct, the conclusion must evidently be either that the atmosphere in which he worked was purer, or that the soil was less capable of germinating organisms. The soil was apparently the same—Darby's fluid meat. They were reduced to the conclusion that, given an equal manipulative skill and a similar soil, the atmosphere in which he worked was more pure than that in which Mr Chiene did. But then comes the question of the experiments with those under the spray. Mr Chiene had a proportion of those that kept free from putrescence overwhelming compared with his. How was this to be accounted for? On the same principle, that the experiments are strictly comparable (they are not identical), and that there was equal manipulative skill, the deduction was that either Mr Chiene worked in a purer atmosphere, or that his soil was less favourable to germs. But, as they had seen, this view of the soil could not be entertained. The only explanation he could see was that there were fewer germs in his (Mr Duncan's) room, but more capable of resisting carbolic acid. They knew that germs resisted very variously. In Watson Cheyne's experiments they had seen that some germs flourished in 1 to 300 carbolic acid, others were killed by 1 to 500. If this conclusion were correct, it necessitated the supposition that the spray was effective in killing so many germs —that a certain number of germs were capable of being killed by the spray, but others were not. At that moment it seemed to him difficult to escape from this conclusion, that the spray was more effective than he had thought from his experiments. Another suggestion, which might have a bearing on this point, was that they were working in a small room in which the spray was perpetually going, so that the atmosphere in it might have been rendered, so far as carbolic destruction of germs was concerned, very free from all the germs which were capable of being killed by carbolic acid, and the probability that they were working with germs not capable of being killed by carbolic acid was strengthened by the fact that his experiments were done in his side-room in the Infirmary, while Mr Chiene's were done in his laboratory in the University. It was a mistake to suppose that he had ever denied the power of carbolic acid to kill germs. He pointed out in the very paper to which Mr Chiene referred that carbolic vapours might kill germs if sufficiently strong. Well, then, there was another point in connexion with this which was of some interest. Supposing the spray acted in this way, how did it do it? That was a point on which he could not give an accurate decision. *A priori* one would be inclined to suppose that in the figure on the board the mechanical blowing away of the germs had more effect than Mr Chiene supposed. Although some experiments had led him (Mr Duncan) to suppose that the centre was the safest place in the neighbourhood, and its margin by a long way the most dangerous, yet he had no doubt whatever that a pure mechanical steam spray without introduction of an antiseptic was not thoroughly effective mechanically. There remained, therefore, the introduction of carbolic acid into the beakers, or that the spray destroyed germs on its way. The introduction of carbolic acid into the beaker might prevent germination, but he did not believe that in his own experiments this was an important factor, because he found that beakers went wrong after the spray had been pumped over them for a long time. It might have a greater effect in the smaller quantity of fluid which Mr Chiene used. But granting that Mr Chiene's experiments proved that the spray acted as spray, it could not be regarded as reliable. If they considered the matter *a priori*, reason must lead them

be kept in connexion with it for some time before they
d into the beaker, and in this respect there might be
ing in the great depth of Mr Chiene's beakers. Therefore
ed to him that what benefit was derivable from the spray,
must be more considerable than he had thought, was a
ation of the germicide properties of carbolic acid, and of
chanical properties of the spray. These questions, which
ll of interesting problems in every direction, and well
of elucidation, he hoped in some directions further to
out. Meantime he had no regret that his experiments had
as a quasi-scientific basis for a change in practice. The
f the change was in itself, to his mind, quite sufficient to
the change in practice. Even were he now to be con-
of the power of the spray to destroy immediately germs
atmosphere, he should not return to it because of its
nience, and because they had other methods of treatment
were quite reliable. His results with his new mode of
nt were very much better than any he had got with gauze,
tosh, and spray.

lack, in the course of a few remarks, detailed the improve-
that had occurred in Manchester Royal Infirmary after the
ction of the antiseptic system by Mr Lund.

oseph Bell felt that the Society was much indebted to Mr
and Mr Duncan for their admirable dialectics. For his
rt, when Mr Duncan showed them that he was able to keep
cent. of putrescible beakers free, it convinced him that the
from falling germs was not so great as they had been
to believe. Mr Duncan's experiments, he thought, showed
was less important to work at the atmosphere than at the

another instrument in its place—an irrigator, which was more convenient and, perhaps, more effectual. It was devised by his late house-surgeon, Mr Gardiner, and consisted of an Ingram's enema syringe with a small perforated nozzle. By means of it Koch's solution was injected into every part of the wound at the conclusion of an operation. Notwithstanding this change of practice he was as strongly as ever an aseptic surgeon, though he did not now feel it necessary to keep the air immediately over the wound aseptic. One thing struck him in reference to the unprotected beakers in Mr Chiene's experiments, and that was their nearness to the spray. If the mechanical theory of the effect of the spray had any truth in it, it was not improbable that germs may have been blown directly into the beakers.

Mr Cathcart thought that to test the question of how the spray acted, it might be well to allow the spray to play over the unprotected beakers, after their period of exposure was over. If a sufficient quantity of carbolic acid from the spray entered the beaker to stop or modify the putrescence, its effects could in this way be tested by comparing results with beakers which had not been subjected to the carbolic spray after exposure.

Mr Miller had listened to Mr Chiene's paper, and had witnessed his demonstration with very great satisfaction, because he was still one of the few surgeons who supported the spray. Mr Chiene spoke of experiments that were being made to bring this matter to a more thorough demonstration. He would suggest to him that if the mechanical theory was not the correct one, that the best proof he could give them that the germs really found their way into those fluids, but unable to do harm, he might show them the dead germs. Whatever be the explanation, he took it that Mr Chiene had demonstrated to them that the spray was more beneficial than they were led to believe last year. With regard to Mr Duncan's reply that evening, he would wish to say this, that they would always find that when a man had got something he wished to prove, it was by no means difficult for him to prove it. If any surgeon with ordinary talents—and Mr Duncan had extraordinary—devoted himself to the idea that he could treat surgical cases well by any special method, he could readily do it. He remembered very well that when he was house-surgeon with Mr Spence they got remarkably good results without any dressings whatever, but this was not due to the absence of dressings, but to the great care taken by Mr Spence. Mr Gamgee's results with dry dressing was another example. As to the kinds of cases that were good tests of the value of the spray, he did not think amputations and such like were, but rather abscesses and other cases containing fluids that were capable of putrescence. Take, for example, abscesses connected with carious bone. Would the same proportion of cases do well without the spray as with it? He thought not. He did lty there was in purifying large beakers and keeping . Any one who had worked at this subject would find it e difficult to carry on experiments with those flasks than ones. A very much greater amount of manipulative necessary. As to Mr Cathcart's suggestion, he had the same thing, slightly varied, when Mr Chiene was When these flasks had been exposed to the spray and had received a certain amount of carbolic acid, they xposed for a time without the spray. Germs entering n probably be prevented from germinating by the layer acid on the surface of the fluid. As to what Mr Bell erence to the position of Mr Chiene's beakers, he should now from Mr Duncan where his unprotected beakers lation to the spray.

can said they were placed at various distances, somehe same table, sometimes on another, but usually behind so that they would not be influenced in any way by the There were many differences between Mr Chiene's ts and his own, viz., the strength of the spray, the e beakers, the quantity of the fluid in the beakers, the of the plug. These might or might not be important. ade a suggestion only on the supposition that they were tant. He would point out to Dr Woodhead that to ptic the large beakers Tyndall's plan was very effective.

ene thanked the Society for the manner in which his been received. He was not prepared to enter on the at Mr Duncan had taken up. He would peruse what id. He thought, however, that whatever germ Mr d in his side-room, he (Mr Chiene) could show a similar material had ruptured into the chief cyst, and had then opened through a small aperture into the peritoneum. (2.) A PREPARATION consisting of a part of the uterus, the dilated Fallopian tubes, with an ovarian cyst which contained papillomata.

II. It was agreed to postpone the discussion on Dr Leith Napier's paper until this had been put in print and circulated among the members.

III. *Dr Angus Macdonald* read his paper on CASES TREATED IN WARD XXVIII., from 1st November 1883 to 30th April 1884, introducing it with the statement that it was called forth by a remark of Professor Simpson's in his introductory address recommending that such reports should be made to the Society.

Dr Craig felt that the Society was greatly indebted to Dr Macdonald for this most interesting record of cases treated in his ward. He hoped that both Dr Macdonald and Professor Simpson would continue to act up to the suggestion referred to by the former, and continue the record of these cases at future meetings of the Society. He might also venture to throw out the hint that Dr Thomas Keith might favour the Society with an account of his operative work, which would, in virtue of its being published in the Transactions as well as the Journal, become available to a larger circle of readers.

Dr Rattray had been deeply interested in the cases recorded. He had been especially struck with the cases of cystitis. He had seen many cases of this disease, and had sometimes had great difficulty in treating them. He found that many cases were much benefited by rest, milk diet, avoidance of stimulants, together with the use of belladonna, buchu, and acetate of potash. Sometimes the local use of nitrate of silver proved effective, but many cases remained unrelieved, or the symptoms readily returned.

Dr Arnott had been reminded of a case of perityphlitis which had at one time come under his care. A young Mohammedan woman had been admitted into the hospital of which he had charge with a swelling in the right side of her pelvis. She was treated for this and sent out. Some time after he found her in another ward in the hospital, and this time she had a fæcal fistula under the umbilicus. He did not think this patient had any abscess when she was in hospital the first time; and he was always doubtful whether this fistula arose from an abscess extending up from the pelvis, or from one coming down from the abdomen. With reference to the use of opium, Dr Arnott said that much belief was placed in it in India as an antipyretic, and in all the cases of laparotomy in his own practice he had invariably given it with quinine to keep down the temperature. He would like to know Dr Macdonald's opinion as to its use for this purpose, or whether he was in the habit of using it as routine after his operations. He had frequently employed sclerotinic acid in place of ergotine as an hæmostatic, and had found it satisfactory in every way, saving its tendency to produce abscess at the point of injection. He would be glad to hear if Dr Macdonald had had any experience in its employment. With regard to the use of silver wire in the treatment of ruptured perineum, he had found that it was regularly employed in Vienna for sutures in that operation. He had himself always employed it in similar operations. In the treatment of cystitis, of which he had seen a great deal in India, he had found that nothing was so effective as sandal-wood oil along with steel. He had seen the best results from its use in male patients. He had also employed frequently nitric acid in a weak solution as an injection, and injections of mucilage, which tended to give much relief from pain. He had had great pleasure in listening to Dr Macdonald's most interesting and instructive paper.

Dr Barbour felt sure that there could be but one opinion as to the value of the paper they had just heard; and his only regret was the smallness of the number of the Fellows who were present to hear it read. He congratulated Dr Macdonald on the success which had attended his cases of hysterectomy. With regard to the albuminuria, he thought that this must be due to the pressure of the tumour. He observed that in both cases Dr Macdonald had employed the Tait's clamp; and he agrees that this was certainly the best. Professor Simpson had found that the ligature of Hegar was not satisfactory, as it tended to slip. He thought it well to mention an accident which happened recently to Professor Simpson in the use of Tait's clamp. While screwing up the bolt for fastening the wire loop the bolt gave way. Had the wire not been already firmly fixed this would have been a serious accident; or, again, in the event of hæmorrhage occurring, and its being necessary to unfasten the clamp, Dr Macdonald seemed to advocate the intra-peritoneal method, and he (Dr Barbour) would like to know why he would recommend it. He himself thought the extra-peritoneal method was to be preferred in virtue of the great facilities it offered in enabling us to control hæmorrhage. He asked Dr Macdonald if he made it a routine practice to dilate before curetting the uterus. He admitted the advantages of the method, but doubted if it was always safe to employ sponge tents in these cases. He certainly thought that there could be no doubt but that the wire had a distinct advantage over silk-worm gut in operations on the vagina or cervix. The stitches could be more firmly secured with wire, and were, further, more easily found when it became necessary to remove them. He differed from Dr Macdonald in regard to the persistency of parametric deposits over perimetric. He thought that the parametric deposits were at least as permanent as perimetric.

Dr Skene Keith certainly agreed with Dr Macdonald in thinking that the intra-peritoneal was the operation of the future. He quite admitted the difficulty, but could not avoid seeing the immense advantages. He had often seen cases of albuminuria previous to the operation in which the urine cleared up entirely after remov of the tumour. He considered silk, prepared by Skene's meth preferable for sutures to either silk, gut, or wire. The method preparation is as follows :—Allows the silk to remain for at lea five hours in melted wax, to which has been added carbolic an salicylic acids, 3 gr. of each to ℥i. He was glad to find th caustic in gynecology was going out of fashion. He was sorry t say it was still much in vogue in London. He had seen while i London an interesting case of cystitis which was so bad that h suggested the formation of a vesico-vaginal fistula. This wa done; in ten days the wound healed spontaneously, and the patient was then able to retain her water for more than half-an-hour. The fistula was again re-opened; and, after being kept open some weeks, was allowed to close, and the improvement was very marked. Dr Skene, of Brooklyn, dilated the os by means of pieces of "slippery elm." It was done by introducing piece after piece of increasing thickness until, in about three or four minutes, the os was large enough to admit of the finger being introduced.

Dr Macdonald, in reply, said he regretted that from the length of his communication it was necessary to read the history of many of the cases very imperfectly. With reference to the case of perityphlitis there could be no doubt of the diagnosis. It was in no way connected with the pelvis, which was quite clear. He was rather inclined to think that in Dr Arnott's case the mischief arose in the pelvis to begin with, and made its way along the peritoneum. He only gave opium after operation when there was much pain. In such a case he would allow a hypodermic of morphia. He never gave it as an antiphlogistic except in peritonitis He had had no experience of sclerotinic acid, as he had been quite satisfied with the results of ergotine. He preferred gut to wire for sutures in all cases where he can easily get at them. Of course, in cases of Emmett's operation, one is compelled to use wire from the impracticability of tying the gut. With reference to the treatment of cystitis, he had referred in reading the cases to some only of the remedies employed. In one case sent him lately by Dr Brakenridge there was a great deal of bleeding and pain, and curiously, on dilating the urethra for exploration of the bladder the bleeding and pain entirely ceased. He was quite convinced that the intra-peritoneal mode of treating the stump in hysterectomy was much the best, but the risks were so great that he would like to see a operator of the experience of Dr Thomas Keith adopting it successfully before he ventured to try it. He had found that Thomas' curette was quite useless for any purpose, and he now never employ it. He felt quite sure that there was no danger in the proper use o a stronger instrument; as he agreed with Olshausen that one ca always readily recognise the peculiar gritty sensation which show we are working on the healthy uterine tissue. With reference t

n of cervix before curetting, he was quite sure that there
ays a good deal of risk in attempting the use of the curette
undilated os. This arose chiefly from the difficulty of
he *débris* removed from the cavity. Whereas, with the os
ilated, the cavity can be readily washed out and rendered
eptic. At the same time he quite admitted the danger
ften attends the use of the tent. In a case which came
ndee some time ago, the patient died from the shock at-
on the dilatation of the os by a tent for the purpose of
s, and the same thing occurred in another case in which
ilated to hurry on abortion.

SION ON THE EARLY DIAGNOSIS AND TREAT- T OF EMPYEMA, AT THE PERTHSHIRE MEDICAL CIATION, ON FRIDAY, 2ND MAY 1884.

Dr BRAMWELL, President, in the Chair.

inclair, Dundee, in opening the discussion, said—My first
r President and Gentlemen, is to thank you very warmly
kind invitation to this meeting, and to assure you that I
deavour to show my sense of the honour you have done
aking my remarks as brief and as much to the point as
. I shall carefully avoid all side issues. I shall equally
e pitfall of an exhaustive or historical narrative. It shall
ndeavour to avoid also all subjects on which I cannot
ith the unmistakable ring of personal experience. And
of my statements appear to you unnecessarily dogmatic
-sided, I hope you will do me the justice of remembering
mode of expression is usually the best adapted for the
of provoking discussion and eliciting opposite opinions.
3rd of March last there died in the Dundee Royal Infirmary
hose case contains some valuable lessons. He had been
ee or four times in the Infirmary for short periods, but only
he latter part of his illness; and he was no doubt long
stage of curability before even his first admission. He
nitted for the last time on the 7th of February of this
d his case was then very carefully taken by Dr Whyte, the
rgeon. The description which I shall now present to you
y drawn from his notes. For some six or seven years the
had been troubled with cough, profuse expectoration,
sness, and general weakness, but no night sweats. During
er part of his illness he was able to work, though occasion-
l aside by attacks which he termed "bronchitis;" but
last few years he had been much worse, and unable to
ny occupation. For a long time he had noticed that his
as contracting, that lying on the left side was apt

to induce paroxysms of coughing, and that on stooping his head and bending his chest he could bring up large quantities of fœtid expectoration, after which he usually had peace for some time. The cough, I may add, was described by the nurse as severe, paroxysmal, and very much like whooping-cough. *On admission.*—The patient was emaciated, sallow, and apathetic. His appetite was poor, his bowels were regular, his tongue was red, smooth, and fissured longitudinally. He complained of no pain. His breath had a fetid odour, which was always worst during attacks of coughing. The fœtor was so great that we were obliged to isolate him from the other patients by placing him in a small ward by himself. The chest was mis-shapen, the right side being very much contracted. At the level of the eighth dorsal vertebra this side measured 13 inches, while the left side measured 16¾ inches. Over nearly the whole of the right lung the percussion note was dull, and at the apex the dulness was almost absolute. In the axilla, however, the note was hyper-resonant. The breathing was tubular, and in some parts accompanied by large crepitation. In the axillary region I heard, I think, almost the most perfect amphoric breathing I ever listened to, and remarkably loud whispered pectoriloquy. V. R. and V. F. were increased. The left lung gave a fairly good percussion note all over except at the apex behind, where there was slight dulness, and in the anterior and infra-axillary regions, where it was hyper-resonant. In the apex the breathing was bronchial, elsewhere it was puerile with prolonged expiration. That this lung was emphysematous was clearly evidenced by the above signs, and by the fact that it was impossible to delimit the cardiac dulness, and that the hyper-resonant note extended to the right of the sternum. The heart sounds were feeble, but otherwise normal. The hepatic dulness began at the level of the fifth rib, and measured 6½ inches in the axillary and nipple lines. Its lower end was well defined, sharp and resistant three inches below the thoracic margin in the nipple line. The left lobe was also enlarged, and the notch for the gall bladder could be easily made out. The urine was very pale, acid, 1008, with albumen. The sputa, which I have already said were extremely fœtid, were separable into three layers—upper, frothy and greenish; middle, serous and turbid; lower, thick and purulent. The temperature during all his residences in the Infirmary never varied from the normal standard, either in the morning or evening. Good food, stimulants, and antiseptic inhalations did no good, and the poor fellow died from exhaustion about six weeks after admission. Towards the end there were few physical examinations attempted, partly because it was evident that the man was dying, and partly on account of the horrible stench. But the post-mortem examination showed that the changes could not have been great from the conditions I have attempted to describe. Now, Mr President and entlemen, the diagnosis which seemed to be warranted in this case y the ill-defined history of gradually increasing bronchitis, the long uration of the illness, the gradually increasing chest contraction, he fœtid purulent sputa, the emaciation, the unvarying normal emperature, the severe paroxysmal cough, and the condition of the iver and kidneys, was bronchiectasis, with fibroid contraction of the ight lung, and amyloid disease of the liver and kidneys as a result f the long-standing suppuration. But the post-mortem examina-ion showed this conclusion, as far as the condition of the chest was oncerned, to be entirely wrong. There was a cavity on the right ide, between the layers of the pleura, containing about half-a-pint f fœtid pus. The right lung was reduced to a carnified mass not much larger than an ordinary man's closed fist, and was so bound down by adhesions that it was very much torn in the process of removal, and in consequence no fistula could be traced. The left lung was healthy, except for very pronounced emphysema. There were no tubercles in either lung. The liver, kidneys, and spleen were waxy. Immediately after the inspection I made it my busi-ess to see the man's wife with the view of ascertaining if she had ny recollection of an illness with any of the symptoms of pleurisy. I found that she attributed all his bad health—rightly, I think you will say presently—to an acute illness eight years ago, beginning with cough and pain in the right side, and followed in the course f a fortnight by purulent sputa, which gradually became offensive. She could not say that the first expectoration was sudden or abun-ant. But she was quite clear as to the date of the commencement f the illness, because at that time she had a child two years old, ho is now ten. The suppression by our patient of these most mportant events in his medical history, I can only attribute to the istless, apathetic state of his mind latterly; and the prominence hich he gave to his supposed attacks of recurring bronchitis always ecoming worse, was no doubt due to the circumstance of which is wife informed me, that the various medical men who attended im in the earlier years of his illness told him he was suffering from ronchitis. Looking back on this case with the light of the post-ortem examination and the fuller history subsequently obtained, ne is very much inclined to blame one's self for the conclusions rrived at. I think now that the extreme degree of chest contrac-ion, the amphoric breathing in the axillary region, and perhaps also he quantity and fetor of the sputa, might and should have suggested different opinion, which would have been strengthened by the dis-overy of the Hippocratic succussion sound. But, on the other hand, he ill-defined history, the protracted duration of the illness (seven r eight years he told us), the unvarying normal temperature morning nd evening, the signs of cavity and consolidation, were quite as ompatible with bronchiectasis; while a degree of chest contraction, he limits of which no man can fix, the fœtid sputa, the paroxysmal ough, and the waxy liver and kidneys, were quite as compatible

disease. Surely no man's dead body ever sho
better example of an important pathological truth, or f
a more eloquent appeal for early diagnosis and rational trea
It is quite unnecessary to recapitulate at length the or
symptoms and signs of pleural effusion, with which you a
perfectly familiar. Every practitioner knows that an illness
ning with a chill, severe lancinating pain in the side,
suppressed cough, and followed by restricted movement
affected side, a dull percussion note over the lower part,
tympanitic note over the apex in front, weak or absent
sounds, and diminished V. R. and V. F., raise a strong presum
of the presence of fluid; and if the decubitus is persisten
the affected side, and the affected side is distinctly increa
measurement, or is actually bulging at the intercostal space
if the heart is clearly displaced, the probability becomes a cert
These are the plain-sailing cases, which hardly any ma
mistake. But a tolerably large experience leads me to the
clusions—that the temperature is not a reliable indicati
distinguishing pus from serum, that, in fact, the latter is
times accompanied by a higher temperature than the f
probably because serum is in some cases a concomitant of
pneumonia; that a considerable amount of fluid in the ple
quite compatible with fairly good health and working power
little respiratory distress, with the presence of vesicular m
(no doubt communicated from the opposite lung) over a
effusion; that in women and children the vocal fremitus is
of very little value; that adhesions of the pleura and perica
materially diminish, and sometimes altogether prevent, the dis
ment of the heart, even in large effusions. And, on the other
it should always be remembered, as Traube has so clearly

nstrument be previously tested, and let its needle be properly isinfected with carbolized oil. An exploratory puncture conducted in this manner can do no harm, but one should never rest atisfied with one negative result. If I fail to find fluid in one place, I try several others if necessary, and I never find the slight pain complained of by the patient; while the results obtained are always in the highest degree satisfactory in clearing up the diagnosis of doubtful cases. When pus is present, and one aspiration fails to produce recovery, there is nothing to be gained by delaying the major operation of free incision, unless, indeed, the patient happens to be a child, when two or three aspirations may be attempted if there are no symptoms threatening life. But, as I have learned by the experience of one very instructive case, that it is quite possible for a sero-purulent effusion, originally serous, again to become serous within twenty-four hours after aspiration, it seems to me a wise precaution, and one which I shall always adopt in future, to draw off some of the fluid by the hypodermic syringe immediately before making the incision. The patient in question had had 50 ounces of serum removed from his left pleura on 7th September last. Two days later he was again in serious respiratory and general distress. Finding that the signs of effusion had returned I again tapped, and this time removed 100 ounces of sero-purulent fluid—fluid so obviously containing pus that no one of the on-lookers had the slightest doubt as to its composition. The rapidity with which this second collection formed—100 ounces in two days—and the well-known danger to life of such large accumulations, seemed to me to warrant the immediate resort to free incision, for which I accordingly arranged next morning, so as to give the patient time to rally from the aspiration. But, on making the incision, nothing but serum escaped. As regards the operation of intercostal incision, I am satisfied that with proper precautions it is seldom attended with danger. I never hesitate to give an anæsthetic (chloroform we are in the habit of using in Dundee), but I never give chloroform, as some authorities recommend, with the patient lying even partially on the sound side. I imitate nature by laying him fairly on the affected side, and I have seen no evil results from this method.[1] I have tried more than one method and situation of incision, but I can give my unqualified approval of one operati only—the one recommended by Dr Clifford Allbutt. An incisi an inch and a half long is made in the middle of an intercost space, parallel with the ribs and below the angle of the scapu (but more laterally if the patient be very muscular), and a fe inches above where the base of the lung ought to be, as determin by examination of the sound side. After letting the fluid esca insert the forefinger, break up any adhesions that may be in t way, and search for the floor of the cavity. Having marked t skin opposite this point, withdraw the finger, and then make second incision there. The upper wound is then stitched, an usually heals in a few days. To a patient in a state of anæsthesi two small wounds are of no more consequence than one, while the advantages secured are of priceless value. You reach the floor of the pleural cavity without the risk of injuring the diaphragm, or any of the abdominal organs, and you ensure that thorough drainage which can only be obtained by an opening in the most dependent part of the cavity. A drainage-tube is then inserted; that of Dr Cousins has answered all my expectations. The air-pad protects the drainage-tube from the pressure of the gradually-contracting opening, which is the great bugbear with all ordinary collapsible drainage-tubes. Solid tubes have the obvious objection of causing much discomfort to the patient. For dressing, a pad of marine or boracic lint, or salicylic wool, and a flannel bandage are quite sufficient, in my humble estimation. Injections of the cavity, except in fetid cases, I have long discarded as injurious, inasmuch as they retard the healing process, and sometimes cause or threaten syncope. When fetor demands their use, which is very rarely in cases treated sufficiently early and energetically, I prefer the siphon action, with the help of a Gooch's double canula, as being much gentler and more gradual than the syringe. When I come to the question of antiseptic treatment of the pleura, I feel that I am treading on delicate ground. As a student and disciple of Professor Lister, who enjoyed the privilege of watching the evolution of his wonderful system almost from its first beginnings, and witnessed some of his grandest triumphs in conservative surgery, I yield to no man in my admiration of his scientific work and his splendid results. But my present experience leads me to the conclusion that empyemata, if treated early, incised at their lowest points, and properly drained, will do as well without as with the Listerian method, while we thus avoid the risk—no small one—of carbolic acid poisoning. Subsequent experience may alter my opinions which I do not set up as final, but my present position is tha early diagnosis and free drainage are the only secrets of succes and that no antiseptic system will minimise the evils of imperfec drainage. Indeed, the recuperative powers of the pleura when i is treated with decent consideration are, to my mind, little sho of marvellous. I have the less hesitation in urging the rejectio

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[1] Since the above remarks were made, a boy who was about to have a left empyema incised, and who had been lying on his left side all through the administration of the chloroform, was suddenly seized with cessation of circulation and respiration, and became deadly pale. Inversion of the body, artificial respiration, and an enema of brandy rapidly restored animation; the operation was completed in the manner above described. I do not think for a moment that the position was the cause of this alarming condition of matters. Probably syncope would have occurred earlier had the patient been lying on the sound side. I think it right to place the case on record, and I am thankful to say it is the first serious trouble I have had with chloroform, although I must have administered it, and seen it administered, many hundreds of times.

iseptic method of Professor Lister, when I am able to
your recollection that Dr Keith has long discarded
in these triumphs of peritoneal surgery with which his
always be honourably associated. Moreover, the line of
which I have successfully carried out, and have ventured
iend, has, to my mind, the great merit that it can be
ithout the slightest difficulty equally in hospital, town,
ry practice. I shall now relate very briefly, as time is
i, two cases recently treated in this way in my wards in
e Royal Infirmary. Case I.—L. D., æt. 21, millworker.
l 1883.—31 oz. of pus removed from left pleura by
19th *April.*—Re-accumulation of pus; double incision;
time after this considerable purulent discharge. 16*th*
ainage-tubes removed; percussion note all but equal on
; cough rather troublesome. 22*nd June.*—Cough gone;
ite healed; general health good. 13*th July.*—Has been
escent Home for three weeks, and has returned for exam-
carcely any contraction observable; expansion all but
rcussion note very slightly higher in pitch over affected
L equal on both sides. Case II.—J. D., æt. 14, message
h *June.*—After puncture, double incision; 56 oz. of pus
om right pleura (copious albumen in urine on admission);
re after this generally normal, rarely 100° in evening;
oz. of pus daily till end of August; physical signs
steadily. 2*nd October.*—Wound healed; general health
h *November.* — Has been in Convalescent Home for a
returned for examination; expansion as nearly as
qual; percussion note equal, except for two inches
affected side; R. M. distinct to base. Let me recall
ment the formidable array of complications and
hich may result from delay in adopting what is now
ged to be the only rational treatment of empyemata—
ion and free drainage: severe bronchial catarrh, bronchi-
eous pneumonia, pulmonary phthisis, pulmonary fistula,
orax, collapsed and carnified lungs, caries of ribs and
itonitis, a cavity which, with collapsed lung and rigid
never contract and heal, lardaceous disease of abdominal
The unfortunate patient, whose case formed the text of
s to which you have just listened, presented, in his own
a few of these calamitous results; and I have no hesitation
that every one of them was avoidable. I have said nothing
d empyema, because it must be treated on substantially
principles as the ordinary form, namely, by low incision
rainage. The higher and more lateral incisions I have
iced, by reason of their obvious imperfections in securing
l drainage, and the necessity for daily injections which
st of necessity involve. Resection of the ribs I have
ng of, because it can never be required in cases recog-

errors and prolonged wearisome and unsuccessful treatm
malady which I am convinced is eminently curable.

Dr Dickson, Dunkeld, referring to the difficulty of diag
stanced a case in which he had seen empyema diagnos
a hydatid cyst of the liver was the cause of the sympt
signs.

Dr Morrison, Dunning, had for some time acted on the
doubtful cases, to explore with the needle, and had so
found pus where there was little reason to expect it. H
opinion that empyema accounted for many deaths attri
phthisis pulmonalis. That pus from the pleura might bur
bronchus and simulate abscess of the lung was impresse
mind by one case in which an abscess of the lung was sup
exist, but post-mortem examination revealed an empyema.

Dr Paterson, Perth, agreed with the preceding speaker,
called an example of pus vomited after a pleurisy, wh
puzzled him at the time, as the patient had not suffered
spiratory distress; but he had since concluded, from th
quent history, that the case was one of empyema.
decidedly in favour of free incision at an early stage.

Dr M'Callum, St Martins, had seen good, and never bad
from injection with carbolic acid. He remembered wel
about forty years of age, a forester, who developed empye
straining his side. After discovering pus by the explorin
the cavity was opened antiseptically about two inches al
diaphragm, and a drainage-tube was inserted. After ten
was deemed advisable to open the chest lower down.
done, more pus escaped, a second drainage-tube was inse
the chest was washed out with a 1–40 carbolic acid solutio

my thanks to those already offered to Dr Sinclair for his excellent paper. I have listened to it with great interest and profit. I think we are all the more obliged to Dr Sinclair because empyema is a disease in regard to the diagnosis of which our text-books are rather vague, and give a very uncertain sound. I should have been glad to hear from Dr Sinclair whether he regards any symptoms or physical signs, such as a second rise of temperature, of value as warranting the suspicion that purulent matter was present. I gather from his remarks that his means of diagnosis is mainly the aspirating needle. Of course, this is excellent and conclusive, but I must say I have experienced often considerable difficulty in persuading parents and patients to allow such a proceeding. I have not found physical signs satisfactory, but think that a careful study of these, and the symptoms, may prove a valuable adjuvant. My experience of empyema has not been large, but of two cases I have a distinct recollection. In neither case did physical signs lead me to diagnose the presence of pus. The first was that of a woman about 26, seven months advanced in her first pregnancy, of strumous type, and not very strong. Three weeks after an acute attack of pleurisy, with effusion, from which she was recovering, labour pains came on. She was very weak, and uterine efforts becoming feeble, I delivered her with the forceps of a living female child. For ten days or so she did well, when the temperature rose and she had an attack of peritonitis, from which she recovered. Coincidently with this the pleural effusion, which had disappeared, recurred. She, however, recovered sufficiently to be attending to her ordinary household duties, though some effusion remained, which I purposed removing by aspiration when the patient felt strong enough to stand it. About five weeks after the birth of the child, I was sent for hurriedly and found her dead. She had coughed and vomited up a large quantity of pus, and the pleural dulness was gone in great part. My second case was that of a lad who came under my care with marked consolidation of the right apex. This improved, but having been exposed to cold he suffered from pleurisy of the left side, with effusion. This I aspirated after a time, and removed four and a half pints of clear serum. Shortly after this the left apex became consolidated, and both it and the right apex began to soften. The pleural effusion returned, and when I aspirated again to relieve dyspnœa, I removed a quantity of pus. These cases illustrate two types. In the former, free incision and proper drainage might have been successful, while in the latter, such procedure would not have been followed by ultimate success. I quite agree with Dr Sinclair as to treatment, and look upon efficient drainage as of the highest importance. I think I would be content with one incision. Perhaps you will allow me to say a word, however, in favour of strict antiseptic measures. I am a pupil and follower of Professor Lister, and am in the habit of using the spray as part of my routine practice. I find no difficulty in its application, and my experience in opening into joints has been so satisfactory, and the procedure so free from untoward results, that I would hesitate to open into such a large serous cavity as the pleura without its use. If this method be properly carried out, we have the great satisfaction of knowing that the patient is safe as regards the operation. Washing out the cavity is not an essential part of Listerism, and may lead to carbolic acid poisoning. Let me conclude by mentioning a unique case of fœtid empyema published by Professor Buchanan in the *Glasgow Medical Journal.*

Dr Urquhart, Perth, spoke with an experience of two well-marked cases, one treated with, and the other without, antiseptics. Both ended fatally, the first with symptoms of carbolic acid poisoning. In this case the aspirator needle had been tried for exploring purposes unsuccessfully on two occasions (20th and 24th January 1883) before pus was found on 25th March. On this last attempt a pint of fœtid pus was removed by aspiration. Two days later two quarts of pus were removed by the same means, and the cavity was washed out with a 1–40 carbolic acid solution daily for four days, at the end of which time symptoms of carbolic acid poisoning appeared. On 5th April a drainage-tube was introduced; but gradual sinking took place, and the patient died a fortnight later. This fatality both with and without antiseptics was apt to make one ask, *What are we to do next?*

Dr H. W. Laing, Bridge of Earn, mentioned two cases which had occurred in his practice. The first, that of a young woman of strumous habit, aged 23. On 17th February 1883 she had a rigor, followed by pyrexia and pain in the right side. There was distinct friction sound, and in a few days a large effusion into the right pleura. On 26th, after consultation with Dr Bramwell, 75 ounces of straw-coloured fluid were drawn off by the aspirator, giving great relief to the patient, and allowing the upper half only of the lung to expand. The lower part of the lung never did expand, and towards the end of the case there was considerable contraction of the lower ribs. On 19th March, removed by aspiration 20 ounces of sero-purulent fluid. On 21st April, removed by aspiration 8 ounces of thick flocculent pus. On 24th, after consultation with Dr Bramwell, the pleura was freely incised, and drainage-tube inserted. Only a small quantity of flocculent pus escaped. High temperature, rapid pulse, increasing emaciation, and abundant discharge continued in spite of washing out the pleura with Condy's fluid, boracic and carbolic acid, iodine, etc., and she died of exhaustion on 23rd July. The second case was a young woman of splendid physique and good personal and family history. She was a domestic servant, and came home from her situation complaining of pain in the right side. He (the speaker) saw her on 26th March, when she was very feverish—temperature 104°, pulse 120—and there was distinct friction at the lower part of the right pleura. She would not go to the Perth Infirmary, and he could see her only every second or third day, as she lived four miles off on the top of an inaccessible hill. A hypodermic injection of morphia and a fly-blister relieved the pain; but the fever continued very high, the temperature never below 103°, and sometimes as high as 105°. On 3rd April he detected slight localized dulness at the lower part of the pleura, and, to his astonishment, on the 5th there was slight bulging and fluctuation. He considered that the continued high temperature and rapid pulse, which were rather unaccountable, were due to the presence of a localized empyema bound down by adhesions and pointing externally. He now insisted on her removal to the Infirmary, where Dr Bramwell at once made an incision, and evacuated 4 ounces of pus, and confirmed Dr Laing's opinion. The woman died on the 4th May, and the friends refused to allow a post-mortem examination.

He endorsed Dr Sinclair's remarks on the value of exploratory puncture of the pleura as a means of great diagnostic value and without risk. He said he had pushed a fine aspirating needle into a condensed lung without any harm resulting. He believed the best treatment of empyema was an early incision and free drainage from the floor of the pleural cavity, as Dr Sinclair had suggested, and had so successfully carried out in his cases.

The President congratulated Dr Sinclair on his successful treatment of empyema, and on his having made up his mind as to what ought to be done in the treatment of this disease. When he listened to Dr Sinclair's clinical report of the case, which formed the introduction and the text of his remarks, he had made up his mind that the case was one of empyema even before he heard the result of the post-mortem examination. It was a great matter for a medical man to have definite notions as to how he ought to act in the presence of acute diseases threatening life and health rapidly. Empyema was not a malady, however, which any one who knew much about it would proceed to treat with a light heart, as many difficulties cropped up in its management which required various modifications in the plan primarily adopted. Treated on non - Listerian or modified Listerian principles, the mortality, according to Dr Goodhart, was 27 per cent. (See *Guy's Hospital Reports.*) Treated aseptically, 16 per cent. (See Porritt's *Cases.*) This is a fact deserving our serious consideration. For himself, he had seen enough, and had heard enough from members that day, to convince him that without aseptic precautions a proportion of cases will go wrong and die which would have been saved by Listerism. Another advantage is that this plan shortens the period of treatment. It is now a generally received opinion that cases of empyema are best treated by making a very free incision well down, say in the 8th intercostal space, parallel to the angle of the scapula, using Porritt's precaution to draw the latissimus dorsi away from the line of incision. This also was Bowditch's favourite region for operation, and no one has ever attained greater success than he. Bowditch did not consider a drainage-tube always necessary, but he kept the wound open by the tip of the finger or a soft catheter introduced from time to time. His results were admirable, and out of 270 cases there was not a single death from the primary free incision and emptying of chests. Children often do well when treated by pneumatic aspiration (see Bowditch and Bouchat), and such is my own experience. But even they should be incised (and they stand incision well), if a few aspirations do not cure. When a drainage-tube is used, it ought to be of large calibre, carefully inspected, cleansed and shortened, as the lung returns to its old place. If the chest wound contracts, and the drainage is not free, a rib or even more should be resected. This is a wonderfully safe proceeding (see Guthrie and others); and although it does in a measure cripple the chest, better this than death by pyemia. I do not believe in it, however, as a primary, but as a secondary proceeding. To tap the chest in front alone is to court failure if there is not a counter opening, and a tube through both (Campbell de Morgan), and it is also a more dangerous position than the eighth intercostal space, where the diaphragm is seldom wounded. Temperature is deceptive as diagnostic of pus in the chest. An aspirator should be used in all dubious cases before incision is performed, to make sure what the fluid is. The operation should be performed early. "If you are in doubt let it out." How many lives have been lost by not attending to this, and not acting promptly! When an empyema in a child has burst into the bronchi, it will probably be dislodged in this way alone. But it is not so in adults. A free incision must be made, as Dr Sinclair has shown, into the chest, to avoid death from quasi-phthisical pulmonary disintegration. It is well to bear in mind what he has brought before us, that some cases of supposed phthisis are only cases of pyo-pneumothorax to be cured by the knife and free drainage alone. I have stated my views already on washing out the chest. Contractions of the chest do now and again follow empyema, when pus has been evacuated, but I have seen a case where sixty ounces of serum were removed by aspiration, followed by marked contraction of the same kind. I do not consider that the occurrence of pus in the chest is necessarily diathetic in its origin. It is clearly, however, often associated with an impure condition of blood. A pleurisy in a parturient woman, or in a case of puerperal fever, is almost certain to end in empyema, and it is the same in children, who are attacked with pleurisy, in the course of fevers.

Dr Sinclair, in replying, said that he felt himself under a double debt to the meeting, for the kind reception they had given him, and not less for the free discussion and criticism they had been

od enough to bestow on his views. In regard first to the
estion of diagnosis, on which his remarks were said to be some-
at barren, he had only to say that errors had occurred, and
uld occur again to the best men in the profession, if they
pended on inspection, measurement, and the phenomena of
rcussion and auscultation, to the exclusion of the exploratory
ncture. These phenomena were most important, and he always
vestigated them with the utmost care. But with all the care
d skill that could be offered, fluid in the pleura was frequently
ot discovered, and in some cases not even suspected, when it
as present in no small amount. They all knew the compressi-
ility of the healthy lung, and the mischief caused by its long
ompression by pleural effusions. The needle was not to be
houghtlessly used, of course. But when a man after exhausting
ll the usual methods still felt the slightest doubt, his clear duty
as to puncture, not, however, with the aspirator apparatus, as Dr
hom supposed him to suggest, but with an ordinary hypodermic
ringe, the needle being rather larger than usual. The objections of
e laity to the stethoscope and the clinical thermometer had now
actically vanished, and the same would as surely happen to the
ploring needle, when its benefits became known. On the
estion of temperature, he was sorry he could not throw much
ht, because he had found in some cases higher temperatures
th serous than with purulent effusions. The precise intercostal
ace which was opened did not appear to be a matter of vital
nsequence. The eighth space, to which so many men pinned
eir faith, was nearly always too high. Get to the floor of the
vity by the help of two incisions, and never mind what space is
ened. In this way no careful man can ever injure the
aphragm or the abdominal viscera. It was gratifying to
d so many disciples of Professor Lister present. He was quite
e to acknowledge that a good case for the Listerian treatment
empyema had been made out by the President and others.
rsonally, he had no reason to complain of his results, so far as
had gone, but he was quite open to conviction. The unique
tid case, to which Dr Thom had referred, had done astonishingly
ell, and reflected no little credit on all those who had charge of
e young lady. It was fœtid from the first, and was clearly there-
re never a case for Listerism, but it was just one of the cases
which he would relax his rule, not to inject fluids into the
eural cavity. To those who felt discouraged by the untoward
sults they had met with after free incision, and who, like Dr
rquhart, asked, "What are we to do next?" he would only say,
cise every adult empyema at its floor as soon as you discover
s, drain it well, attend carefully to matters general and local,
d you can do no more. He heartily endorsed the President's
servation that empyema is not necessarily diathetic in its origin,
d he begged to remind gentlemen present of the infrequent

association of pleural effusion and tubercular lung mischief at po mortem examinations. That was a most encouraging circumstan In concluding, he said, I am sure, Mr President, that every one us will carry away from this meeting most valuable lessons fro your ripe judgment and experience. Your advice as to caution no doubt needed by some of us, perhaps by myself as much as b any one in this room. We have differed on some matters, but w have found many points of contact on the broad principles whic must guide us in the management of this formidable disease.

Part Fourth.

PERISCOPE.

MONTHLY REPORT ON THE PROGRESS OF THERAPEUTICS.

By William Craig, M.D., F.R.S.E., Lecturer on Materia Medica, Edinburgh School of Medicine, etc., etc.

Substitution of Sodium Iodide for Potassium Iodide.—Dr Berg (*Arch. of Medicine*, April 1884) enters into a plea in behalf of the sodium iodide. Both from theoretical considerations and practical experience he urges the substitution of the sodium for the potassium salt. He makes the following claims for the iodide of sodium:—1st, It can be used therapeutically for almost all,—certainly the chief purposes for which potassium iodide is used; and, he believes, with similar beneficial effects; 2nd, Sodium iodide is more assimilable than the iodide of potassium, both locally to the digestive organs and to the general system; 3rd, Many of the local and general undesirable effects, which are produced by the potassium iodide, do not follow the use of the sodium iodide. He concludes by saying that it is to be hoped, therefore, that the sodium iodide will be used by those whose clinical advantages admit of an extensive trial of the drug, so that a more extended experience may confirm that which a limited experience would seem to claim for this drug.—*American Druggist*, June 1884.

Bichloride of Mercury in Fœtid Bronchitis.—The value of corrosive sublimate as a germicide and as an agent for the arrest of the putrefactive process is being the more generally conceded, as the substance is being submitted to the test in such affections as are traceable to septic conditions. Dr Koranyi, an Italian physician, has recently reported excellent results from its use in fœtid bronchitis, after carbolic acid, turpentine, and other antiseptics had been tried without benefit. He administered it in the form of a spray of a solution of 1 : 10,000 (one grain dissolved in twenty-one ounces of water), using half an ounce of this solution morning and evening. Its effect was to reduce the temperature to the normal at the end of six days, and to remove from the expectoration its fœtor. If further trials shall corroborate this report, this new use of the drug will form a valuable addition to therapeutics. The danger of mercurial poisoning must, however, not be lost sight of, and its possibility during a course of such treatment must be carefully borne in mind.—*Therapeutic Gazette*, July 1884.

BLACK HAW IN VOMITING OF PREGNANCY. By W. B. Ketner, M.D., Superior, Nebraska.—Recently I met in my practice an obstinate case of vomiting of pregnancy, on which I tried in vain oxalate of cerium, morphine hypodermically, popcorn, hot water, etc., etc. I looked upon the case as resulting from faulty digestion, but that could not be improved until this distressing symptom was relieved. After the means mentioned had failed, and my patient was becoming very weak, I thought of black haw and its well-known effect on an irritable pregnant uterus. I at once gave it a trial, giving 30 drops of the fluid extract every hour for three hours, which I succeeded in getting the stomach to retain, by administering the first dose soon after an hypodermic injection of morphine. After the three hours were up my medicine was still retained; I diminished the dose to 20 drops, and made the time between doses two hours. Twenty-four hours had not passed when all nausea had ceased, and the stomach tolerated food. Attention for a few days to my patient's imperfect digestion has put her into a very comfortable condition. In two former pregnancies this lady has suffered for nearly a month from this very annoying complaint, and became so exhausted as to be unable to leave her bed. I feel like acceding to black haw, that it may be of good use in this new field, though one case can do little more, perhaps, than suggest its use in such cases. This patient had been vomiting for two days before I saw her, and for the next three days I only partially relieved her, until I tried the black haw. On the morning of the sixth day after the vomiting began, she ate a hearty breakfast, and has continued to improve up to the present time.—*Therapeutic Gazette*, July 1884.

CASE OF DYSPEPSIA AND CHRONIC CHILLS TREATED WITH TINCTURE OF EUCALYPTUS GLOBULUS. By C. Barlow, M.D., Eaton, Ill.—Mrs W., age about 45, has malarial cachexia and dyspepsia of long standing. Has had tertian ague at intervals for the past five or six years. During this period and for some time previous, her digestion was so poor at times that she could take no other food than bread and water. I treated her a few years ago for this trouble, and she improved very much on quinine, tincture of nux vomica, and Fowler's solution. Her trouble returned last fall, and her condition became worse than before. She had a chill every third day, appetite poor, and vomited whenever she took food. Crackers and water constituted her sole diet. She was very thin in flesh; said she could not retain medicine of any kind on her stomach, and especially quinine. I learned that she had been taking various remedies without receiving much benefit on account of her rebellious stomach. I determined to try eucalyptus globulus, and gave thirty drops in about one ounce of water every four hours. Vomiting ceased immediately, appetite improved, chills became lighter, and finally disappeared. The chills returned subsequently, and were broken this time with quinine. There was no return of the vomiting, her appetite remained good, she gained flesh rapidly, and is now well. Except the few doses of quinine, she took no other remedy than the eucalyptus. — *Therapeutic Gazette*, July 1884.

OSMIC ACID IN PERIPHERAL NEURALGIA.—For some time there have been occasional references in medical literature to the use of osmic acid in peripheral neuralgia. This trouble has not been amenable to treatment, therefore we will briefly give the results of A. Eulenberg in twelve cases. To Winniwartch is due the credit of causing an interest in the therapeutic action of osmic acid. Weuber calls attention to two cases of severe trigeminus neuralgia, and one obstinate case of five months' standing of sciatica, treated by injections of osmic acid, with entirely satisfactory results—even when all the known remedies had been prescribed with little or no results. The formula used by E. in the treatment of his cases is as follows:—

℞ Acidi osmici, 1.10 . (gr. xvij.)
Solve in aqua destill., 10.0 (ʒijss.)
Put in a dark glass, securely stoppered bottle.

It is always preferable to prepare the injection immediately before using, since, after standing a little, the solution decomposes, or rather discolours; while this does not make it inert, it is more desirable to use it fresh. The dose oftenest used ranged from 0·05 to 0·05 (gr. ⅛ ⅝). Even larger doses do not cause any unpleasant after effects or secondary symptoms. In order to attain the anti-neuralgic palliative or curative effect, it becomes highly necessary that the injections be made in the region of the seat of pain, or as near the affected nerve as possible. If made into the paraneurotic tissue, the acid will undoubtedly, with its great power of diffusion, penetrate into the perineurium and nerve substance, producing thereby a local effect, and deems it quite important that some attention should be paid to the region of injection, the same as when morphine and carbolic acid have been used. It has occurred that patients demanded a repetition of the treatment in a different region, since the pain had entirely disappeared from the original site. The therapeutic results generally, when taking all of the cases together, are not so very brilliant. Among the twelve cases treated only three were cured. No relapse in fourteen weeks. In four cases there was a marked improvement, and in the remaining five cases there was no result whatever. The three that recovered were acute, uncomplicated, and possibly of a neuritic or perineuritic origin, while in the cases where there was no change at all there were complications; the cases were of long standing, with multiple forms of neuralgic affections. We must, nevertheless, not forget to call attention to the fact that in the cases that were relieved no other therapeutic agent had been employed, and the course was of short duration—three or four weeks—about the average time when treated with other narcotics. The author hesitates somewhat to fully recommend osmic acid as an anti-neuralgic remedy, while it undoubtedly enjoys the property of being a capital remedy in many cases of this disease (*Wiener Medizinische Blatter*).—*Therapeutic Gazette*, July 1884.

OCCASIONAL PERISCOPE OF DERMATOLOGY.

By W. Allan Jamieson, M.D., F.R.C.P., Extra Physician for Diseases of the Skin, Edinburgh Royal Infirmary; Lecturer on Diseases of the Skin, Edinburgh School of Medicine.

The Paste Treatment of Inflammatory Skin Diseases, especially Eczema.—The idea of a fatty excipient is so much associated with every cutaneous application, that it is necessary to bear in mind that each region of the skin, its special and individual peculiarities (for example, the greater or smaller amount of natural oiliness), and lastly, each medicament in relation to its physical and chemical characters, requires for the case in point an appropriate vehicle. Well-to-do persons object to the greasiness of ointments; their expense is a consideration to the poor. Lassar has introduced the paste treatment in particular, of eczema. The special constituents of his were starch and vaseline; in eczema oxide of zinc and salicylic acid were added. Unna, while endeavouring to improve the mode of application of fatty materials for circumscribed affections of the skin by his salve muslins, had a paste prepared from kaoline and oil or glycerine. He thought that as the salve muslin for limited, so the kaoline paste would be suitable for universal disorders of the skin. He finds, however, that this was too limited a conception, and that lead, starch, dextrin, and gum pastes may replace the kaoline pastes. A good paste should be quickly and easily spread as a thin layer on the skin, and should spontaneously form in a short time a dry, firmly adherent coating.

Kaoline Pastes.—Pure kaoline, with vaseline or glycerine in equal parts, with oils such as olive, almond, linseed, in the proportion of 2 to 1, will produce a good paste. With more linseed oil a liniment is produced. This spread on extensive surfaces leaves a quickly drying residuum. When other ingredients, such as acetate of lead or oxide of zinc, are used, the kaoline and oil or glycerine are first to be mixed, and then the lead or zinc added, as the kaoline and the mineral are otherwise apt to form an insoluble cement. A suitable paste for eczema is this—

℞ Kaolini puri,
Ol. lini. (v. glycerini), . āā 30·0
Zinci oxidi,
Liq. plumb. subacet., . āā 20·0

Instead of white kaoline the yellow or red is occasionally preferable for pastes for the face. The kaoline pastes are not merely suitable for the treatment of all kinds of eczemas, erythemata, and intertrigines, but are also suited as vehicles for strongly oxidizing, reducing, or caustic remedies.

Lead Pastes.—Unna found a popular recipe for an efficient lead paste was to boil a quantity of litharge with double the quantity of vinegar till the vinegar has evaporated, and the litharge has been transformed into a moderately damp paste. The skin is smeared with this paste. Should the paste become dry in time, it can be heated up with a fresh quantity of vinegar. After some trials he has adopted the following formula:—

℞ Lithargyri subt. pulv.,. . . . 50·0
Aceti, ... 80·0
Coqua. usque ad consistentiam pastæ, adde
Ol. lini. (v. glycerini, v. ol. olivæ), . 10·0

This paste possesses considerable exsiccative power.

Starch Pastes.—While in the kaolin and lead pastes the adhesive and drying ingredients are combined, in the starch, dextrin, and gum pastes the uniting substance sinks into the position of a mere means of attachment, to which the property of drying must be imparted by the addition of some tempering material, as oxide of zinc, sulphur, etc. When one employs as a base a glycerine of starch containing much starch, the resulting paste resembles the kaolin and lead pastes. When, however, as is suitable, a starch basis having the following constitution is adopted:—

℞ Amyli oryzæ, . 3·0
Glycerini, . . 2·0
Aq. distill., . . 15·
M. Coqua. ad remanent. 15

A thin combination is obtained, which takes up fairly well active substances in the solid form, and yet drying rapidly, fixes these well when spread on. This glycerine of starch basis takes up a half and more of solid material, but if one desires to incorporate more than this, the proportion of glycerine must be increased. For convenience the solid substances are to be mixed directly with the starch, glycerine, and water, and then all heated at once.

℞ Zinci oxidi, . 50·0
Acid. salicylici, . 2·0
Amyli oryzæ, . 15·0
Glycerini, . . 15·0
Aq. distill., . 75·0
M. Coq. ad, 140·0

This forms a good starch paste for eczema. For an acne starch paste—

℞ Sulphuris precip., .	40·0
Calcis carbonat, . .	2·0
Zinci oxidi, . .	20·0
Amyli oryzæ, . .	15·0
Glycerini, . . .	20·0
Aq. distill., . . .	75·0
M. Coqua. ad,	120·0

As the starch pastes are after drying not so brittle as the lead, the two may be combined, but only in one fixed proportion.

	No. 1.	No. 2.
℞ Amyli oryzæ, .	10·0	10·0
Glycerini, . .	30·0	30·0
Lithargyri, . .	30·0	40·0
Aceti, . . .	60·0	80·0
Evapora ad,	80·0	90·0

The first formula is cream-like, the second like cement, and forms a thicker layer.

Dextrin Pastes.—Dextrin has already been used in surgery to produce immovable bandages, but has scarcely found its way into dermatotherapy. It is recommended to use the officinal pulverized dextrin. A simple paste can be made of equal parts of dextrin, glycerine, and water. As the commercial dextrin is not free from starch, by heating this a better mixture is made, but the heating should not be too long continued. This simple dextrin paste is a good drying medium. If powders are to be added, an additional half by weight of glycerine is necessary. Thus a good paste for eczema is—

℞ Zinci oxidi, ...	40·0
Dextrini,	
Aq. distill., ...	āā 20·0
Glycerini, ...	40·0
Sulphuris sublim. (v. Natri sulpho-ichthyolici),	2·0
M. Coqua. fiat pasta.	

A dextrin paste for freckles—

℞ Zinci oxidi, . . .	10·0
Bismuth oxychlorid, .	2·0
Hyd. perchloridi, . .	0·2–0·5
Dextrini,	
Aq. distill., . .	āā 10·0
Glycerini, . . .	15·0
M. Fiat coquando pasta.	

A mixture of lead and dextrin pastes form a good eczema paste.

℞ Lithargyri, . 30·0
Aceti, . . 50·0

Coqua. ad remanent. 50·0
Adde
Dextrini,
Aquæ,
Glycerini, . āā 15·00
Antea cocta.
M. F. coquando pasta.

Should the dextrin paste become somewhat too hard through the addition of dry substances, it suffices, as in the glycerine gelatines, that a few drops of hot water be added, so as to render the paste easily spread. When fluids are added in compounding the paste, water is partly or entirely superfluous. Thus:—

℞ Dextrini,
Glycerini,
Liq. plumbi subacetat, āā 10·0
M. Coqua. fiat pasta.

Gum Pastes.—As a natural sequence of ideas, Unna came lastly to employ ordinary gum arabic as the adhesive basis of the pastes. The proportion is a simple one—

℞ Mucilaginis gummi acaciæ,
Glycerini, . . āā p. i.
Pulveris, . . . pp. ij. M.

Heating is unnecessary. For the chronic eczema of children the following is an inexpensive and suitable formula:—

℞ Zinci oxidi, . . . 40·0
Hyd. oxid. rub., . . 2·0
Mucilag. acaciæ,
Glycerini, . . āā 20·0

℞ Cretæ preparat.,
Sulphuris sublim., . āā 2·0
Picis liquid, . . . 8·0
Amyli, ... 20·0
Mucilag. acaciæ,
Glycerini, . . āā 15·0

For scabies—

℞ Zinci oxidi, . . . 40·0
Bals. Peruvian., . . 20·0
Mucilag. acaciæ,
Glycerini, . . āā 30·0

In hacked nipples—

℞	Sacchari albi,	
	Zinci oxidi,	
	Mucilaginis acaciæ,	
	Glycerini, . .	āā 5·0

The gum pastes also suit well as excipients for chrysarobin and pyrogallic acid.

℞	Amyli, ...	25·00
	Acid. pyrogallici, . .	5·0
	Mucilag. acaciæ,	
	Glycerini, . .	āā 15·0

The gum pastes cannot be employed as vehicles for acids, since these destroy their adhesiveness. Oily substances can be incorporated with them, as—

℞	Acidi salicylici, . .	20·0
	Glycerini, . . .	20.0
	Mucilaginis acaciæ, .	30·0
	Ol. ricini, . . .	10·0

M. Fiat pasta molle.

This is useful in keratoma of the hands. Endeavours to find such pastes, which can be kept ready prepared in bulk, have not so far been crowned with success. The addition of glycerine and oil does not hinder from drying up in time, and the better the paste, that is, the more rapidly it dries when applied to the skin, the more quickly it perishes when kept. But by these pastes a commonly felt defect in our medication is filled up and a suitable method of employing various active drugs is presented, as the following *résumé* shows:—*Lead* can be best employed as acetate in the simple lead paste or in combination with the dextrin paste; with both all other preparations of lead mix well, as the carbonate, the oleate, and the iodide. *Oxide of Zinc* appears as a subordinate ingredient in the kaolin and lead pastes, as a principal element in the starch, dextrin, and gum pastes. *Sulphur* suits the starch, dextrin, and gum pastes, is less compatible with the kaolin, and not at all with the lead paste. The preparations of *ichthyol* suit for all except the gum paste. *Tar* suits better for the starch, dextrin, and gum than for the kaolin and lead pastes. *Naphthol*, *carbolic acid*, *chloral hydrate*, and *camphor* can be incorporated with all the pastes. *Salicylic acid* mixes well with all the pastes, unless with the gum paste, in large proportions. *Iodine* and *iodoform* suit for the lead, kaolin, and gum pastes, not for the starch and dextrin. *Corrosive sublimate*, *calomel*, *red and white precipitate*, can be incorporated with all the pastes. *Chrysarobin* and *pyrogallic acid* suit best the kaolin and gum pastes. Animal, vegetable, and mineral fats and soaps can be mixed in small quantities with the pastes without injuring their properties, but not in large amounts.—Dr P. G. Unna, *Monatshefte für Praktische Dermatologie*, Feb. and March 1884.

MEDICAL PERISCOPE.

BY FRANCIS TROUP, M.D.

DIABÉTIDES GÉNITALES.—Under this title, Fournier, in Nos. 31, 32, 34, 35, for 1884 of *La France Médicale*, prelects on diabetic eczemata of the genital organs. Diabetic eczema has two peculiarities, persistence and tendency to relapses (*aux récidives*). It may be acute passing into chronic or chronic from the first; when acute it restricts itself to the vulva and immediate neighbourhood, when chronic a more extensive surface is invaded—hips, groins, mons veneris, and lower part of abdomen. The objective symptoms of this chronic form are those of all chronic eczemata,—a brown, or livid, or vinous redness; weeping in some parts, desquamation in others, itching sometimes intolerable, but the special stamp of the disease is the thickening and infiltration of the affected tissues. When once established, the chronic form of diabetic eczema of the genital regions never abandons them; *elle y est, elle y reste*, it only modifies itself by extending its frontiers or undergoing acute exacerbations, transient or partial, or complications such as furuncles. Not treated, it lasts indefinitely; treated, it is somewhat susceptible of retrogradation and resolution, but only after much expenditure of time and care. The general indication is of course to suppress the efficient cause of the local lesions—the glycosuria. The local indications are those which compose the topical treatment of eczema,—warm baths, baths of bran or starch; lotions of alkaline solutions, and aspersions of such inert powders as starch and oxide of zinc. In man the cutaneous eruptions of the genital organs determined by diabetes are identical as objective modalities with those produced in woman,—they are erythemata and eczemata, the latter predominating in frequency and relative importance. The variety at once the simplest and commonest and earliest is an *erythematous balanitis*. Redness of the glans is the sole objective phenomenon. This redness seldom invades its whole surface, but is limited to the circumference of the meatus, which is seen framed in an oval erythema, glossy, smooth, and turgid. A second form generally consecutive to this is a *herpetiform balanitis*. Upon a red, hyperæmic base numbers of superficial excoriations, like pin-heads in size, and coalescing to form round or irregularly oval outlines, appear, but there is no initial vesicle as in herpes. A third type, much more common, is an *eczematous balanitis*. Sufficiently variable in aspect, yet in its habitual form it is a dry desquamating eczema of the glans. The epithelium of its surface is thick, cracked, broken, and desquamating, and its gray or white tint contrasts the red ground of the glans: here and there the surface is fissured, and bleeding or scabbed. Often, besides the smegma, a whitish scurf is to be met, which under the microscope is seen to be a vegetable parasite resembling a saccharomycete. The prepuce, like the glans, succumbs to the irritating influence of the saccharine urine, and a *posthitis* soon associates itself with the balanitis. The characters of this diabetic posthitis are at first a rosy coloration of the extremity of the prepuce, then a certain degree of œdematous swelling of the organ; later the erythema becomes an eczema, and one finds—(1) on the cutaneous face of the prepuce, upon a hyperæmic erythematous base, desquamation of small scales is going on; (2) on the mucous surface there is a vivid redness, and an eroded aspect due to a certain degree of epithelial exfoliation; there is also slight serous or sero-purulent oozing; and last, on the level of the inferior ring of the prepuce, where the symptoms are most accentuated and characteristic, one observes the lesions of an *eczema rimosum*, documented by a circle of linear chaps disposed around this preputial ring like the spokes of a wheel. These chaps, resulting from the inelasticity of the infiltrated prepuce, are produced whenever it is drawn back over the glans. Like other insignificant traumatisms, they cicatrize almost as soon as they are formed, but they just as easily reconstitute themselves, and thus keep the preputial ring in a permanently chapped and fissured condition. This eczematous balano-posthitis is of itself sufficient to make one diagnose diabetes, or at least to think of diabetes as its probable cause, and forthwith to institute an examination of the urine. But this lesion is not the last word of diabetes to the genitals, it is only a halting-place which conducts to *diabetic phimosis*. Three major phenomena bring this about,—(1) progressive thickening and infiltration of prepuce—it becomes hard and coriaceous; (2) diminution, then loss of elasticity of the organ; (3) narrowing and then definitive atresia of the preputial orifice. This is caused by the chronic local irritative processes of which the prepuce is the seat, and by the fact that the linear tears and chaps gradually convert its terminal circumference into a ring of cicatricial tissue, eminently contractile, hard, and sclerous, so much so that one might almost think it was made of pasteboard. Sometimes preputial lymphangitis of chronic type causes the formation of nodules which might easily be mistaken for sub-preputial tumours of another nature, such as vegetations, indurated chancre, or cancroid lesions. Diabetes, in a high degree, realizes the type of chronic tegumentary irritation which determines the production of vegetations; it is wonderful that they are not seen more frequently; they differ from vegetations born under the influence of other causes in two points, their exuberant growth and their persistent repullulation after destruction. Of course the major indication of treatment is the diabetes; of the local accidents treatment is preventive, avoidance of contact of the urine with the penile integuments, and where the disease exists baths, alkaline lotions, dusting with isolating powders, zinc, bismuth, talc, boracic acid, etc. Where there is phimosis, the same, with local baths of mallow and elder, and above all frequently repeated sub-preputial injections first with pure water, and then with medicamented solutions, sodic carbonate or borate; if there is suppuration, nitrate of silver. The opposed surfaces of glans and prepuce should be kept separate by pledgets of wad. Circumcision should never be practised unless the urinary sugar has completely disappeared. Gangrenous diabetides of the genitals are very rare, and the author has never seen them in the female. From this clinical history two important conclusions may be drawn—(1) there exists a natural group of dermatoses which differentiate themselves from all others by their absolutely special origin, diabetes, and as a logical consequence, by the therapy applicable to them; (2) the genital manifestations of diabetes ought often to reveal it where latent, or where its other symptoms have been neglected or misunderstood.

PERISCOPE OF GYNÆCOLOGY AND MIDWIFERY.

By J. Milne Chapman.

Further Facts concerning the Use of Corrosive Sublimate: An Answer to Professor Stadfeldt (Tänger, Breslau, *Centbl. f. Gynäk.*, No. 9).—The writer draws attention to the various papers which have been published regarding the use of this antiseptic in midwifery practice, and shows that, while Joporski and Bröse never experienced any toxic effects from its use, and Kehser only saw 6 very slight cases of mouth irritation among 221 cases where it was employed, he himself has never seen any, though a 1–1000 solution has been used as a vaginal injection after each examination that was made, and as a routine practice post partum. He expresses himself as being sceptical as to whether Stadfeldt's case, related above, was in reality one of acute mercurial poisoning, and holds that, even though it should have in reality been so, the occurrence of a single case like it should not militate against the use of such a certain antiseptic as he believes this to be. In the Breslau Hospital 240 cases were treated by vaginal injections of 1–1000 solution of perchloride of mercury before and after labour. In 12 cases an intra-uterine injection was given immediately after labour, and in three cases intra-uterine injections were used during the puerperium, without in any case producing the slightest toxic symptoms. In the extern practice equally safe results were obtained, and it is here noted that in every case where an intra-uterine injection was made on account of high temperature the fall was speedy and satisfactory. In conclusion, the writer significantly remarks that the intra-uterine injection of carbolic acid solution is certainly not free from the objection of the possible occurrence of toxic effects.

In No. 11 of the same Journal, Dr Bokelmann reports a case from the Breslau Gynæcological Department, where, after an operation for restoration of the anus and perinæum, during which a constant douche of 1–1000 sublimate lotion was used, bowel symptoms attributable to the mercury appeared. This fact he attributes to the exposure of the mucous membrane of the rectum to the douche. In support of the use of sublimate as an antiseptic in gynæcological practice, he states that, while carbolic acid injections frequently cause burning pain, the employment of the sublimate is never attended by any, and while the former frequently causes swelling of the edges of wounds as after perinæum operations, the latter never does. He particularly recommends its use for the keeping down of smell in cases of carcinoma of the cervix.

In No. 12 of the same Journal, Dr Fuhrmann, of the Breslau Midwives' School, states his experience of the use of the sublimate as having been satisfactory in over 400 cases. He gives tables of the average temperatures of two corresponding series of cases, in one of which carbolic lotion had been used, in the other the sublimate, and shows that in the latter class the temperatures were much lower, and that in a greater proportion of cases there was no rise above the normal.

In No. 13 of the same Journal, Stenger of Mannheim relates a case of acute mercurial poisoning coming on on the third day after delivery, with symptoms lasting for three days. The chief symptoms were colic, bloody stools and tenesmus, with great diminution in the quantity of urine passed, and the presence of albumen. Two days after the onset of these symptoms salivation commenced; though the use of sublimate as an injection had been stopped on the third day. The patient recovered, and Dr Stenger says that notwithstanding the occurrence of this case, and of that reported by Stadtfeldt, he will continue the use of perchloride in his practice, as he has found it to be much more trustworthy and efficacious as an antiseptic for midwifery purposes than carbolic acid.

The Prevention of Puerperal Infection: A Study of the Practice in the Maternity Hospitals of Paris, Prague, Berlin, Parma, Glasgow, Copenhagen, and New York (Simon Baruch, M.D., *New York Medical Journal*, March 22nd, 1884).—The writer gives the details of treatment adopted in the above named hospitals along with the statistics of mortality in each, for the purpose of showing that the use of vaginal injections after labour as a routine practice is not devoid of danger. In conclusion, he "presents a brief sketch of a scheme of antiseptic midwifery," which he regards as being "a happy mean between extreme measures on the one hand, and the purely expectant plan on the other." The paper, which is republished in pamphlet form by Appleton & Co., is well worthy of perusal. The following extract gives the drift of the writer's argument:—"In order to bring out the more striking points of these statistics, derived from large lying-in institutions, in a salient manner, I will group side by side the percentage of mortality reported by those obstetricians who habitually resort to prophylactic vaginal injections after normal labour, and those who abstain from this interference with the natural processes, trusting to scrupulous external cleanliness and antisepsis.

Hospitals in which injections are practised.	Mortality, per cent.	Hospitals in which injections are not practised.	Mortality, per cent.
Charité (Hartmann)............	2·5	Pavillon Tarnier, Paris, 1880, to June 1883..................	0
Charité (Gusserow). Average 1879 to 1881, inclusive......	1·5	Prague Maternity, 1880 (Breisky and Weber)........	0·46
Charité (Gusserow). Sommerbrodt, 1882...............	1·6	Prague Maternity, 1880 (Breisky and Weber)........	0·56
Maternity at Parma............	3·42	Breisky (Fischel), 1881.......	0·21
Glasgow Maternity (new building)......................	1·56	Breisky's ward alone, 1882...	0
		Copenhagen Maternity, 1880.	0·26
		" " 1881.	0·5
		Prague, 1883, 1100 cases......	0
		New York Maternity, third series, Dr Garrigues.........	0

In compiling these statistics, I have exercised the greatest care to exclude all institutions whose methods of antisepsis are not clearly defined in published records. It has been my aim to further the progress of puerperal management by pointing out that, while the improvement in such hospitals as the Charité has been remarkable since the adoption of strict antiseptic cleanliness, there is still a vast difference in favour of such hospitals as those of Prague under Breisky and of Paris under Tarnier, the mortality in the Charité being, say for 1882, 1·6 per cent., and the mortality under Breisky and Tarnier, for the same year, *nil*. Wherein lies the difference in the antiseptic methods of these institutions? *Chiefly, perhaps solely, in the use of prophylactic vaginal injections after normal labour.*"

PERISCOPE OF MEDICINE, CLINICAL AND PATHOLOGICAL.

By G. A. GIBSON, M.D., and WILLIAM RUSSELL, M.D.

THE PATHOGENETIC INFLUENCE OF DILATATION OF THE STOMACH.—At the Société Médicale des Hopitaux M. Bouchard made an original and important communication on this subject. It was based on 220 carefully analyzed cases. The condition was held to be much more common than is generally believed, occurring in nearly a third of the patients examined. In two-thirds of the cases it may be said to have been latent. It may manifest itself by some of the ordinary symptoms of gastric derangement, but the sign which is absolutely diagnostic is gastric splashing (*clapotage*), produced by manipulation of the abdomen when the individual is fasting, the splashing being made more evident if some water is first drunk. The condition had been observed in nervous debility, in ataxics, hysterics, hypochondriacs, in those suffering from migraine, vertigo, and nocturnal priapism, and had been attributed to neurasthenia. But he found on careful investigation into the history of his cases that the gastric condition was the initial affection. He places his cases under nine heads: (1.) Where the condition does not show itself—only the signs of some concomitant affection manifesting themselves; (2.) Manifesting itself by flatulent dyspepsia; (3.) By enteritis; (4.) The hepatic form by pain in the hepatic region, with exacerbations some hours after food, and perhaps jaundice; (5.) The nervous class, including migraine, spinal irritation, an asthmatic variety, and a false angina; (6.) A renal form, where there may be albuminuria or uric acid, with renal colic; (7.) Characterized by the development of cutaneous eruptions; (8.) A form accompanied by various rheumatic complaints; (9.) A consumptive form, including cases, regarded as nervous fever, or as of a tubercular tendency, or of laziness, also cases of apparent chlorotics without vascular murmurs. The gastric condition, he argues, implies imperfect digestion and a resulting inanition and general weakening of the vital forces; but it also leads to the production and introduction into the system of noxious products of a class resembling ptomaines, and also of lactic and butyric acids, indol, phenol, and marsh gas, all of which must modify nutrition profoundly. He holds the opinion that the dilatation is the predisposing and efficient cause of all the maladies enumerated.—*Revue Médicale*, 21 Juin 1884.

THE COLD DOUCHE IN PHYSIOLOGICAL ALBUMINURIA.—Dr Coignard (de Vichy), in a memoir presented to the Société de Médecine of Paris, asserts that the methodical employment of the cold douche leads to the disappearance, in a large proportion of cases, of the albumen present in what is called physiological albuminuria. He contends that the condition is wrongly regarded as physiological, and that it is no more to be thus regarded than varix, hæmorrhoids, or migraine. At first there is a temporary increase of albumen after the douche; but by continuing it for twice a day for a month or more the albumen disappears. In Bright's disease the albumen does not disappear after the douche.—*Revue de Thérapeutique*, 15 Juin 1884. Dr de Châteaubourg has also studied this condition, and finds albumen to be very commonly present. Rest in bed diminishes the amount present. Physical fatigue and mental work have a great influence on its production. Digestion, if accompanied by repose, has not much influence on the condition.—*Ibid.*, 1er Juillet 1884.

MORBID OCULAR CONDITIONS IN DISSEMINATED SCLEROSIS.—

Parinaud has studied these conditions with Charcot, and divides them into three groups, as they respectively affect the muscles, the iris, and the optic nerve. (*a.*) The muscles are the most frequently affected, exhibiting paralysis or paresis of associated movements. This may be only manifested by a want of facility in the performance of lateral movements or of convergence for short distances. Also the paresis may show itself by the corneal edge not being carried so far beyond the angle of the lids as in the unaffected eye, or by a tendency to return to the median line from exhaustion of the paretic muscle. Diplopia is frequently present at the commencement of the affection, but after a time seems to be compensated for, while at a still later period it can always be discovered by proper examination. Nystagmus is the most important motor condition, and is simply a trembling of the paretic parts. In repose the eyes are motionless, but if any attempt is made at fixation or movement the trembling is produced. (*b.*) It is not rare to find a little inequality of the pupils, and they are usually contracted, but their reflexes are normal and sometimes even a little exaggerated. In tabes it will be remembered that the pupils do not respond to light while they continue to accommodate for distances, while in disseminated sclerosis, the reflexes are retained for both light and accommodation. (*c.*) The affection of the optic nerve leads to three forms of amblyopia. In the first there is a lowering of acuity of vision, with a degree of dyschromatopsia for red and green. In the second form the amblyopia has a more rapid development, and may lead to absolute if transient blindness; considerable amelioration may and usually does ensue, but the dyschromatopsia continues, and the disc remains white. In these two forms, even with great atrophy of the optic nerve, they scarcely ever go on to complete blindness, and this also distinguishes the condition from tabes. In the third form, which is the rarest, the visual affection is monolateral. In it the field of vision is irregularly retracted, there is no dyschromatopsia, and the atrophy of the disc is very marked. —*Le Progrès Méd.*, 9 Aout 1884.

A FACT IN HYPNOTISM.—M. Beaunis, Professor of Physiology to the Faculty of Medicine at Nancy, records an extraordinary case under the above title. The patient was a girl aged 12½, and was suffering from her fifth attack of chorea. M. Beaunis had been informed by Professor Birnheim of the result of hypnotism in a similar case, and decided to have it tried. A Dr Liébault was the agent to hypnotize the patient. The result was that as soon as the child was hypnotized all choreic movements ceased, and when asked to write, instead of meaningless scrawls, her writing was steady and legible. The seances were continued for some days, and the child was cured completely. M. Beaunis says the facts require no comment.—*Gaz. Méd. de Paris*, 2 Aout 1884.

ARTIFICIAL PRODUCTION OF LUNG DISEASE BY INHALATION.—Wargunin has just published the results of an investigation which he has carried out in the laboratory of Professor Rajewsky, with the view of testing the effects of inhalation of phthisical sputa as compared with other organic matters. The experiments were performed on dogs which were confined in a wooden box, through a hole in which a spray was directed upon the animal occupying the box. The substances to be inhaled, which were thrown into the box with the vapour, were phthisical expectoration, fresh and disinfected, emphysematous sputum, Swiss cheese, and wheaten flour. Eleven experiments were performed with unaltered phthisical expectoration, each animal undergoing several inhalations (varying from three to twenty-seven), after which it was allowed to live for some months until it died or was killed. Two of the eleven dogs, however, are still alive, being kept for further observations. Careful examination was made of all the organs after death, and in every case pathological products were found in the lungs which, to the naked eye, had a close resemblance to tubercular nodules. Three experiments were made with phthisical expectoration disinfected by means of carbolic acid. In only one of these were there any morbid appearances resembling those in the former experiments, but the animals were not allowed to live so long, which may account for the difference in result. One dog inhaled the sputum of an emphysematous patient; four were experimented on with a spray of cheese emulsion; and two with a similar spray of wheaten flour. One of these dogs, unfortunately, was bitten by another suffering from rabies at the commencement of the experiment (which was conducted with cheese), and its death was too soon to allow of the progress of any disease reaching a recognisable stage. The other six, however, on post-mortem examination gave evidence of exactly the same pathological processes having taken place as those which followed the inhalation of the phthisical sputum. Wargunin concludes from this that the pulmonary disease, resulting from these inhalations, cannot be due to a specific poison, but simply to the mechanical and chemical influence of the substances in the spray. He examined every lung microscopically, and found that the morbid products were caused by lobular broncho-pueumonia,—not by any tubercular process. The clinical features of the disease which the animals manifested had nothing in common with tuberculosis.—*Archiv für Pathologische Anatomie und Physiologie und für Klinische Medicin*, 5th June 1884.

Part Fifth.

MEDICAL NEWS.

Royal Colleges of Physicians and Surgeons, Edinburgh.—The following gentlemen passed their final examination for the double qualification in Medicine and Surgery at the sittings held in July and August 1884, and were admitted L.R.C.P. Ed., and L.R.C.S. Ed. :—Edward Muscroft Taylor, Scarborough; Arthur

Wyndham Martin, Much Wenlock, Shropshire; Henry Bennett, Rotherham, Yorkshire; Samuel Alexander M'Keague, Wellandport, Ontario, Canada; George Alder Blumer, New York; William Edward Sprague, Ontario, Canada; James Johnston, Jamaica; George Franklin Shiels, Edinburgh; Fredk. John Clandinnen, Edinburgh; Duncan Clark, Kirklands, Bothwell; William Alexander Warters, Derby; Edward James Sheppard, Bristol; Joseph Henry Zepero, Edinburgh; Joseph Gillis Wynne, Armagh; James David Black, Cockburnspath; Robert Lloyd Legate, Timahol, Queen's County; Philip Cecil Harcourt Gordon, Edinburgh; Major Henry C. Irving, Edinburgh; A. E. Weightman, Liverpool; Joseph Fitzgerald, Edinburgh; Benjamin David Craigie Bell, Falkirk; Horace Smith, Weston-super-Mare; Johnstone D. J. Harris, Leighton Buzzard; James Hindle, Accrington, Lancashire; Louis Vallei, Edinburgh; John Paterson, Glasgow; Francis S. Eagar, Kilkee, Co. Clare; William Bowie Barclay, Kilwinning; James Alexander Hutchison, M.D., Liverpool; Oran Merton Belfry, Edinburgh; William Porteous, Edinburgh; Robert Ovens, Edinburgh; James Rose, Waterford; James Bernard Wall, Birmingham; Charles Edwin Solomon, Liverpool; Joseph Agnew Moon, Dungannon, Co. Tyrone; Alexander Stewart Thompson, Ontario, Canada; Robert John Draper Hall, Rochdale; Eli Thomas Eede, Edinburgh; Samuel Wilbraham Griffith, Gwynfryn Hannor Pwllheli; Daniel Joseph Patrick M'Nabb, Newcastle; Patrick G. Griffith, Claremorris; John Herbert Stacy, Norwich; Richard Crawshaw Holt, Accrington; William Henry Clark, Aylesbury, Bucks; John William Ridley, South Bank, Yorks.; James W. Moore, Coleraine, Co. Derry; James Mungle, West Calder; Walter Eyre Lambert, Dublin; Benjamin George Brock, Glasgow; Edward Mortimore Smith, Armley, Leeds; Charles Thomas Blackwell, Kingstown, Ireland; B. A. Maturin, The Vicarage, Lymington, Hants; Henry Aked. Pearson, Sale, Cheshire; John Frederick Sturrock, Golspie, Sutherland; William MacDermott, Ballymoney, Co. Antrim; Samuel Burnside Boyd Keers, Ballymoney, Co. Antrim; Charles Hawkins Copley Woodhead, Leeds; Richard Harrison, Edinburgh; Edward Ratcliffe Fidler Mason, Leeds; Edward Kershaw, Manchester; Robert William Felkin, Edinburgh.

ROYAL COLLEGE OF PHYSICIANS, EDINBURGH.—The following gentlemen passed their final examination at the sittings held on August 9, 1884, and were admitted L.R.C.P. Ed.:—John Howard North, Birmingham; William Lucknow Bradshaw, Co. Leitrim; Lionel John Shepherd, Torquay; Harry Ernest Hamerton Matthews, Manchester; Frank Smith, Coventry; James Milner Milner, Barnsley; Henry Waite, Leeds; Thomas Walker Simpson, Edinburgh; Richard Searle Wright, London; James E. Brown, Enniskillen, Canada; Thomas M'Cullough, Ontario, Canada; Horace Hartley, London; Tegid Aneurin Evans, London; James Henry Jolliffe, Devonport; George South, London; Sydney Glenn Allen, London; William Rae, Northampton; George Samuel Wild, Liverpool; William Moss Bristow, Liverpool; William Robert Culling, London; Robert Simpson, Congleton, Cheshire; Ernest Noad, Helensburgh; Charles Reginald Edwards, London; Ernest John Jerome, Cornwall; Henry Valentine M'Laughlin, Dublin; John Wyatt-Pratt, Taunton, Somerset; William Henry Waterhouse Stacey, Norwich; James Edwin Cheyne Wilson, Devonport; Elmes Yelverton Steele, Abergavenny; Charles Wm. Jaxeline Bell, London

UNIVERSITY OF GLASGOW—LIST OF DEGREES CONFERRED IN THE FACULTY OF MEDICINE.—The following received the degree of Doctor of Medicine:—*Robert Allan, M.B., Scotland; James Dunlop Boyd, M.B., Australia; David Donald, M.B., Scotland; Mark Kippax Hargreaves, M.B., England; John Goff, M.B., Scotland; John Robertson Lewis, M.B., Scotland; ‡George S. Middleton, M.A., M.D., Scotland; Robert Miller, M.B., Scotland; William Morrison, M.B., Scotland; Angus Macphee, M.B., Scotland; Peter Caldwell Smith, M.A., M.B., Scotland; ‡John Lindsay Steven, M.B., Scotland; James Thomson, M.B., Scotland; James Wills, M.B., Scotland. The following received the degrees of Bachelors of Medicine and Masters in Surgery:—Alexander G. Auld, Scotland; Harry Bamber, Scotland; John Beveridge, Scotland; William T. Blakely, Scotland; William Brown, Scotland; William Brown, Scotland; William M. Brown, Scotland; John Innes Brownlee, South Africa; George Clark, Scotland; James Cowie, Scotland; James Crawford, Scotland; William Cullen, Scotland; James B. Cumming, South Africa; John Cunningham, Scotland; Henry E. N. Dobie, China; William Ecklin, Scotland; James Findlay, Scotland; David Finlay, Scotland; Alexander Frew, Scotland; Andrew B. Fulton, Scotland; Michael H. Greener, England; Charles O. Hawthorne, England; James Hinshelwood, M.A., Scotland; Alexander Jack, Scotland; Hugh Kelly, Scotland; Francis E. Kendall, England; Arthur G. Keogh, Australia;

John A. Kerr, Scotland; Matthew Killoch, Scotland; Charles G. King, Scotland; Alexander Kirkpatrick, Scotland; Robert Livingstone, Scotland; Duncan Marquis, Scotland; William Gray Marshall, M.A., Scotland; Henry Mason, England; John M. Mathie-Morton, Scotland; Robert G. Miller, Scotland; Archibald N. Montgomery, Scotland; Andrew Murdoch, Scotland; James William A. Murdoch, Scotland; Benjamin W. Macarthur, Scotland; Duncan Macartney, M.A., Scotland; William M'Cracken, Scotland; William M'Creadie, Scotland; Thomas C. M'Culloch, Scotland; Roderick Macdonald, Scotland; Alexander MacDougall, Scotland; Duncan MacGilvray, Scotland; Ernest Mackenzie, England; Charles Mackinnon, M.A., Scotland; Donald J. Mackintosh, Scotland; Digby M. Macphail, Jamaica; Alexander M. Macrae, Scotland; Alexander B. Paterson, India; Alexander Peacock, Scotland; William G. Pretsell, Scotland; James Ralley, Scotland; William Rankin, Ireland; John O. Reddie, Scotland; John Ritchie, England; Alexander Robertson, Scotland; Frank Russell, Scotland; Henry Rutherfurd, M.A., Scotland; Gavin S. Scott, Scotland; Robert Scott, Australia; Miller Semple, Scotland; Robert M. Service, Scotland; Mark Sharman, England; James Shaw, Scotland; John Sinclair, Scotland; William Muir Smith, Scotland; Wm. F. Somerville, M.A., B.Sc., Scotland; Walter W. Spence, Scotland; Francis Taylor, Scotland; Wm. C. Taylor, Australia; Joseph Thornley, England; George B. Todd, Scotland; Allan Watt, Scotland; John White, Scotland; George Wilson, Scotland; James Wilson, M.A., B.Sc., Scotland.

* Commended for Thesis. ‡ Highly commended for Thesis.

List of Candidates who were successful for appointments as Surgeons in Her Majesty's British Medical Service at the competitive examination in London on 11th August 1884.

No.	Name.	Marks.	No.	Name.	Marks.
1.	Forrest, J. R.,	2475	16.	Johnson, C. W.,	2100
2.	Russell, M. W.,	2395	17.	Berryman, W. E.,	2100
3.	Morinni, W. R. de,	2370	18.	Lilly, A. T. J.,	2080
4.	Zimmermann, B. F.,	2355	19.	Caldwell, R.,	2075
5.	Stace, A. F.,	2340	20.	Reilly, C. C.,	2065
6.	Stables, A.,	2295	21.	Duncan, S. E.,	2060
7.	M'Craith, J. F. E.,	2285	22.	Maher, J.,	2030
8.	Smith, E. A. C.,	2265	23.	Perry, A.,	2030
9.	Hewson, W. M.,	2210	24.	Cordozo, S. M.,	2010
10.	Moffet, G. E.,	2210	25.	Scanlan, A. de C.,	2000
11.	Haines, H. A.,	2180	26.	James, H. W.,	1990
12.	Moir, J. D.,	2175	27.	Trevor, R.,	1990
13.	Crofts, R.,	2150	28.	James, H. D.,	1970
14.	Dobson, G. M.,	2140	29.	Turner, W.,	1970
15.	Hale, G. E.,	2130	30.	Norpon, B. O. W.,	1960

OBITUARY.

DR A. MONTGOMERIE BELL.

Those of our readers who knew Dr Alexander Montgomerie Bell must have heard with great regret of his death at the early age of 42. The third son of the late John Montgomerie Bell, advocate, Sheriff of Kincardineshire, he had the great advantage of spending his youth in a home noted for culture and refinement. After receiving an education in general literature, he applied himself with youthful energy to the study of medicine, in which he graduated at Edinburgh. He was shortly afterwards one of the Presidents of the Royal Medical Society, in which he was associated with perhaps his greatest friend, David Simpson, eldest son of the late Sir James Simpson.

After spending some time in foreign travel, he began definite work as a physician, first in Fifeshire, and afterwards at St Boswells. It is to his life at St Boswells that his friends look back as the time when his professional powers were most fully and happily exercised, and his genial nature found a fit field for expansion and growth. From all his patients, rich and poor, he won an amount of affection and respect which makes his name still proverbial in the district. No one who visited him there could fail to see how this affection was gained. Devoted to sports of all kinds, he had a deep contentment in quiet country life; again, his own direct and homely wit made him at once appreciate every trace of "character," often so prominent in the rural districts of Scotland. While these points showed his own individuality of character, his popularity was due to his simple devotion to the duties of his profession. When he left St Boswells, his patients and friends came forward to give him a testimony of their esteem, and his answer to them well expresses his character. "While much touched," he said, "by all you have now done and said, I am at a loss to understand what I have done to deserve it; during my residence among you I have merely endeavoured to lessen suffering and to prolong life, which are the duties of a physician."

On leaving St Boswells, which he did not without regret, he settled in Edinburgh. He became one of the physicians of the New Town dispensary, and worked assiduously among the sick poor, but he did not make any definite effort to establish a practice. This was due to his own knowledge that his life hung by a thread. The late Dr Warburton Begbie had warned him years before of the danger he ran in continuing his practice even at St Boswells; and on the morning of Monday, July 28th, this weakness, an affection of the heart, carried him suddenly away.

A short, uneventful life indeed, and yet to all those who knew him well, this untimely death seems the blight of many high hopes. Dr Bell was in many ways no common man, and had it not been for his uncertain health, he would doubtless have left his mark in the world. Few men of his years were better all-round practitioners; in midwifery and gynæcology he was specially well instructed; in surgery he was apt, fearless, and untiringly helpful. Quickwitted, humorous, transparently truthful and honest, he hated all sham, pretension, and tradesmen's ways and tricks, and kept himself absolutely free and above all such aids to wealth and reputation. To meet him in the street and have a crack was like a breath of fresh country air.

Boylike to the last in his love of fun, of horses, of dogs, he bore up under a burden of suffering, often amounting to anguish, with a bravery and unselfishness which none but his nearest friends can realize. To many of us the loss of such a man, only understood by those who knew him well, cannot be repaired.

Part First.

ORIGINAL COMMUNICATIONS.

I.—DERMATOLOGY AT THE INTERNATIONAL MEDICAL CONGRESS AND IN THE DANISH HOSPITALS.

By W. Allan Jamieson, M.D., Extra Physician for Diseases of the Skin, Edinburgh Royal Infirmary.

If the total number of members attending the Congress of 1884 was less than at that of 1881, the foreign element was both numerically and relatively greater, and the amount and quality of the work done will compare very favourably with the great meeting in London. There is a degree of quiet earnestness in the Danish character which may have conduced to this; and while labour and refreshment were most admirably blended, there was an entire absence of any feverish hurry. As I devoted my time exclusively to the section of Dermatology and Syphilis, I can speak only of what was done there. The classroom in the University, where it held its meetings, was always well filled, and close attention was paid to the subjects for the nonce under discussion. Professor Haslund, the president, opened the proceedings on Monday morning, the 11th August, by a short address of welcome, delivered in French, and then the programme for the day was proceeded with. The etiology of lupus vulgaris took the first place in the list, and Professor Doutrelepont, of Bonn, enunciated his views. He regards lupus as a form of tuberculosis of the skin, and cites in support of this the histological structure of the lupus tubercles, the proved presence of tubercle bacilli in these, and the results of the inoculation of portions of lupus tissue on animals. He believes also that the clinical course of lupus is in favour of this view. Dr Leloir of Paris followed, and developed still further the same view. When Professor Kaposi in turn spoke, he rejected the opinion that lupus is a tuberculosis of the skin *in toto.* He had seen, he said, 1200 cases of lupus, and considered it a disease *sui generis,* and quite distinct from tuberculosis of the skin, a rare disease, of which, however, he had seen a few examples. He produced from his portfolio some drawings of true tuberculosis of the skin, the scrofuloderma of some authors. One of these showed the characteristic, painful, and well-defined ulcerations on the upper lip of a man; another, those on the lips and tongue. The features of scrofuloderma there depicted were most truthful and life-like, and were certainly quite different from those ulcers ordinarily seen in lupus. Professor Pick of Prague held that while tuberculosis of the skin was not necessarily lupus, yet lupus was a form of tuberculosis of the skin. While therefore an advance was made towards the solution of the question, no definite agreement was arrived at.

A paper by Dr Goldscheiden, Neisse, " On the Specific Functions of the Nerves of the Skin," was illustrated by a number of diagrams, life-size and enlarged, of the points of sensation of heat and of cold in different parts of the body, such as the tips of the fingers, the palms and backs of the hands, and the arms and back. On comparing the magnified charts it was seen that the points where heat and cold respectively are perceived, while in close relation, are not identical.

On Tuesday morning Dr Armauer Hansen and Dr Neisser showed microscopic preparations illustrative of the bacillus lepræ in the museum devoted to the exhibition of instruments, drugs, and appliances, generally useful in cutaneous or venereal diseases, before the meeting of the section.

Dr Hansen showed the threads, chains, and spores, stained with methyl violet, the result of cultivation in blood-serum.

Dr Neisser demonstrated the presence of the rods in the liver and spleen of lepers. Dr Unna then described and exhibited some of his very useful and ingenious additions to the local treatment of skin diseases. In the first place he showed his salve muslins—thin pliant rolls of muslin or thin cotton spread on one or both sides, very smoothly and perfectly, with various salves. These salves are so compounded by Mr P. Beiersdorff, No. 46 Wohlers Allee, Altona, that they do not run, and are thoroughly incorporated with the muslin. In this way pieces of suitable size, and containing ingredients adapted to the case, can be cut off and at once applied. They accommodate themselves to all the sinuosities and inequalities of the parts, and at the same time adhere closely. Those salve muslins, which are spread on both sides, containing a larger quantity of the materials, are efficient for a longer time than those merely treated with the unguent on one surface.

Unna showed on a person present the way in which the zinc salve muslin, one of the most ordinarily applicable forms, can be fitted to the fingers, to the spaces between the fingers, by making slits in the piece and then drawing it on; to the forehead, the cheek, and, wrapped round a tube of oiled paper, to the inside of the nose. Iodoform salve muslin can, in like manner, be applied to the glans penis. More adhesive, owing to a basis of guttapercha or indiarubber, the plaster muslins were next shown. These were beautifully flexible and admit of close adhesion. The mercurial and the salicylic plaster muslins attracted most attention. The glycero-gelatines were next exhibited, or, as Unna called them, the glycerinleim compositions. These are soft and hard, and when employed are melted by means of boiling water, in a vessel containing which the can with the gelatines is placed, and when these are melted a layer is painted on with a brush and allowed to become hard. A formula for a generally useful one is,—

℞ Zinci oxidi,
Gelatini puri, . . āā 10·0
Glycerini,
Aquæ, ... āā 40·0

This Unna recommends for eczema of the bends of the elbows. Pencils of iodoform were shown which, dipped in water, could be used to touch a sore more or less lightly; and others made like those recommended by Bulkley, by Mielk, Hamburg, of adhesive substances, which, heated in a flame and then pressed closely to the scalp and snatched rapidly away, could be used to replace epilating forceps. The museum contained many modifications of Volkman's spoons for lupus and epithelioma, and of scarifying knives and acne lancets; also an ingenious instrument, the invention of Professor Bergh of Copenhagen, for facilitating the discovery of the acarus scabiei. This consisted of an achromatic Coddington lens, with a broad needle in its focus. This needle could be used to explore the furrows, which were rendered distinct by the magnifier. This is made by Nyrop, Kjöbmagergade, Copenhagen.

When the section met, a deep impression was made on the members present when Professor Haslund announced, in a few appropriate sentences, the death of Sir Erasmus Wilson, who had so ably presided in the same section at the London meeting in 1881, and who then seemed as energetic and vigorous as ever. The chair for the day was then taken by Professor Kaposi of Vienna. Dr A. Hansen of Bergen showed three leprous patients affected with the anæsthetic as well as the tubercular form. One of these was a still healthy-looking man, who had the tubercular form of leprosy on his cheeks and forehead, and the anæsthetic on the forearms. There were symmetrically-placed atrophic patches on the outer aspect of each forearm near the wrist, but so far movement was not materially interfered with. The second was a more advanced case. There were tubercular patches on the forehead, and these interspersed with atrophy on the nates, the brownish-red patches alternating with the white atrophic areas. All the affected parts occurred on the extensor and not on the flexor aspect. The third was the most advanced case of all. There was complete wasting atrophy of the muscles of the forearm and of the leg near the ankle, and this was developed to such a degree that the man required assistance to undress, his hands being quite helpless. On the foot the last phalanx of the great toe had become necrosed, and a mere pad of flesh was folded over the second. On the back were pigmented spots, where there had been macules or tubercles. There was ectropion of the lower eyelid and keratitis, due to exposure and desiccation. Dr Hansen regards the disease as a specific one, contagious and not hereditary. The anæsthetic form, in which bacilli have not been found abundantly, he considers curable. The bacilli were found in nerves which had been extirpated from a patient in Honolulu affected with the anæsthetic form. Though cured, and no longer able to communicate leprosy, since they do not convey the leprous products, such persons are nearly valueless for active purposes. The tubercular cases die either as the direct result of the disease, or more often from secondary causes, and, as a rule, long before they are cured. With reference to the etiology, heredity and communicability exclude one another, since we are unacquainted with any contagious disease which is at the same time hereditary. Syphilis is not an example of this. It was shown by elaborate tables that isolation causes a rapid, or at least a very considerable diminution in the evolution of new cases of leprosy. The discovery of the bacillus lepræ has not yet solved the question of contagiousness, but goes to establish this; and the failure of experiments in animals is inconclusive. Dr Zambaco of Constantinople maintained that the disease was hereditary and not contagious. He described a primary stage of congestion omitted, he thought, by Dr Hansen, and showed a large collection of recently executed drawings of leprous cases in all stages of the disease which he had brought from Turkey. These were chiefly tubercular. The afternoon was occupied with a discussion on a paper by Dr Pick, Prague, on the excision of the hard chancre.

Wednesday was a day of pleasure intercalated between those of serious work. Five large steamers conveyed the members of the Congress, their wives, and many Danish ladies and gentlemen, to the number in all of more than 2000, to Elsinore. The day was genial, and the coasts of Denmark and Sweden showed to much advantage. The harbour at Elsinore is small, and some time was occupied in landing the passengers, as one vessel only could enter at a time. A large concourse of people had assembled to welcome the learned men. Throughout all the time the extreme orderliness, patience, and good-humour of crowds in Denmark was particularly observable. On entering the castle of Kronberg a salute was fired from the guns mounted on the walls, and an excellent lunch was partaken of in various rooms of the castle set aside for this purpose. After this the members dispersed themselves to the town and its neighbourhood, including the pretty sea-bathing suburb of Marienlyst. On returning to Copenhagen by rail, a halt was made at Hilleröd to see the palace of Frederiksborg, scarcely yet completely restored after a disastrous fire in 1859. It contains a number of pictures of the kings and queens which were saved, and the rooms are exceedingly handsome.

des rather than the verumontanum and openings of the ducts. By the endoscope, too, granulations and polypi seen in the mucous membrane. Dr Liebreich, Berlin, the subject of the treatment of syphilis by means of l injections. He employs the formamide of mercury. cid is $\overset{H}{C}.OOO$, when two molecules of oxygen are replaced by we have $\overset{H}{CO}, NH_2$. And when one molecule of hydro- eplaced by one of mercury we have $\overset{H}{CO}, NH, Hg.$, the le of mercury. This, when injected deep into the tissues, uch less chemical reaction than the solution of perchloride ry, or indeed, than any other solution heretofore used. ımide and the propionamide are also useful. In the dis- /hich ensued Kaposi declared himself still favourable to od of inunction. Dr Behrend, Berlin, read a paper on a diagnosis between hairs affected with the fungus of surans and that of favus. So long ago as 1873, Dr Dyce th had shown that hairs from a case of tinea tonsurans ere affected by the fungus elements became yellowish- ıen moistened with chloroform and allowed to dry. This on, though quoted by Neumann in his *Lehrbuch der Haut- ten,* seems to have been forgotten, and is not mentioned the more recent manuals; it has escaped the notice of Smith. Behrend, however, again unearthed it, and in his cation pointed out that dark hairs affected with the ton tonsurans become white when touched with chloro- ıile hairs from favus are unchanged. Specimens of ıairs, of hairs from ringworm, and of hairs from favus so which he said were identical in appearance with those found and figured by Lang. He stated that a parasitic disease of the skin was not necessarily contagious, and cited tinea versicolor in illustration of this. Professor Pick said that it was more common to find spores in the scales of psoriasis than to fail in finding them, yet declared himself not as yet converted to the parasitic theory of the disease. Dr Unna mentioned a clinical fact in support of the contagiousness of psoriasis, at least in some instances. A nursemaid with psoriasis on the elbows and knees was placed in charge of three children, having no hereditary history of psoriasis, yet all three in course of time manifested it. Professor Lang maintained his previous opinion, and added that the fact that many of the most efficient remedies for psoriasis were of the class of parasiticides—as tar, chrysophanic acid, naphtol, thymol, etc.—favoured this. Dr Jamieson had not so far found the fungous elements described, though psoriasis was common in Scotland, and thought that the beneficial effects of alkaline baths, which could scarcely be regarded as in any sense parasiticide, in causing the disappearance of the patches of psoriasis told against the parasitic theory. Dr Wulff, in summing up, made the suggestion that the spores might possibly proceed from within outwards, as well as be implanted from without on the surface. The whole subject is very interesting, and deserves, and will likely obtain a searching investigation.

Dr Lipp of Gratz read a contribution to the study of variola and vaccinia, chiefly with reference to the occurrence of micrococci in the vesicles of these diseases. He had found micrococci in both, which, if not identical, resembled one another very closely. These micrococci arrange themselves in fours and multiples of fours. He had inoculated the result of the cultivation of the second generation, but so far unsuccessfully.

The concluding paper was read by Professor Haslund on the "Pathogenesis of Gonorrhœal Rheumatism." Respecting this two theories exist. One, that the so-called rheumatism is a result of the invasion into the articulations of the pathognomonic microbes of gonorrhœa; the other, that it is a purulent infection caused by the absorption of pus, produced by the urethral inflammation. The discoveries of MM. Petrone and Hammerer still remain the sole proofs of the first view. The gonococci have been sought for in vain in the fluid which distends the articulations by many. Dr Haslund's observations incline him to the theory of purulent infection, without, however, being contradictory of the other opinion.

The President then closed the section with a short farewell address; and on a motion of thanks to him made by Dr Doutrelepont, and seconded by Dr Thin, the meetings terminated. The general feeling was that much valuable work had been done, and much information gained by all.

On Monday, the 18th, I visited the Kommune Hospital, which

, under the charge of Professor Haslund and Dr Pontop-
The latter took me round the male wards, the visit being
ernately by each to the male and female side. All those
who were able came to the doctor, who seated himself at
of the ward with his back to the window. Moist eczema
ed while still oozing with unguentum diachyli, and when
arge had ceased with Lassar's paste. The treatment was
ntirely external, internal medicines of any kind are
ever prescribed. Dr Pontoppidan admitted that possibly
carried too far, though he thought we, but especially
n physicians, erred in the opposite direction. He said the
treatment by local measures alone was quite satisfactory.
ie, in answer to a question, that eczema of the palms and soles,
ans uncommon in Britain, is scarcely known in Denmark.
sis, which seems of pretty frequent occurrence, is treated
aline baths, followed by inunction with vaseline, as re-
led by Liveing, combined with the internal administration
ic. For circumscribed cases painting with chrysarobin
cine is employed. In scabies Kaposi's naphtol ointment
one to three inunctions being usually sufficient. No
e given when this mode of treatment is followed.
ire family had come in to be treated for scabies. All
one were found to be affected, and he, a boy of 11,
riasis presenting an unusual localization. The knees,
head, and trunk were not implicated, but the patches
sis were scattered symmetrically over both thighs, and
ne, though the disease had existed for some time.

diculi pubis, a solution of corrosive sublimate in vinegar is
l found efficacious. Petroleum or kerosene oil in the

Chancres are treated with iodoform till nearly healed, and then are covered with emplastrum hydrargyri. Chloride of calcium in lotion is also a favourite application. For the constitutional treatment of syphilis the hypodermic method is exclusively employed, the needle being plunged deep into the nates, and the part rubbed briskly with the hand, when the needle has been withdrawn, to diffuse the fluid through the cellular tissue. The preparation already mentioned as that suggested by Professor Liebreich of Berlin is the one adopted. One per cent. of the formamide of mercury is the strength employed, dissolved in distilled water, and of this one gramme (15 mimims) is injected every second day. From twelve to eighteen injections are required in general. No pain is caused, nor are abscesses apt to form, while the disappearance of the cutaneous symptoms is rapid. Buboes are freely incised as soon as pus forms; then the interior is scraped with the sharp spoon, and the part dressed with iodoform, and covered with salicylic wool.

Quite a contrast to the modern Kommune Hospital is the Almindelig Hospital or Infirmary for Incurables, situated in the north-eastern part of the city, quite near the winter residence of the Royal Family, and considerably more than a hundred years old. For part of it little is being done,—that part into which registered prostitutes, found or suspected to be diseased when examined at the police office, are admitted and kept till cured. There are in all 1300 beds in this hospital. Dr Grünfeld took me over the incurable portion, the beds being filled mostly with old people. One case of myxoedema was shown me, exhibiting the same features as are found in the disease with us. The man had had it for more than ten years. There were many examples of myelitis, of ataxy, and of chronic rheumatic arthritis. One woman affected with the latter had been upwards of forty years in the hospital. Only one part seemed inconveniently crowded—that division where aged persons, not suffering from any ailment in particular, are kept. Here the beds were certainly packed rather closely.

In the absence of Professor Bergh, Dr Jespersen showed me the Lock Hospital. There are 520 registered prostitutes in Copenhagen, and many suspected women. At present the registered alone are treated here, the others are taken into the Kommune Hospital. A new hospital for venereal diseases is being built near the Tivoli, where all will be admitted when it is opened next year. From 60 to 70 women are usually inmates of the Lock. Inspection seems to be carefully conducted, since the cases are not as a rule severe: gonorrhœa, soft sores, lacerations, and abrasions constitute the majority. Syphilis is rare; usually there are but six or seven cases in all, and of these some are recurrences. Gonorrhœa is treated with irrigation with boracic acid lotion through a speculum. Urethral gonorrhœa is carefully looked for,

amune Hospital, only the injections are made daily for 21
en every second day. Mucous patches are treated with
acid solution, latterly as strong as one in five. The
cus is often looked for in gonorrhœa, and is usually found.
nining the patients, except specula, no mechanical means
ed to replace the fingers, though I was shown flat lead
at one time employed to separate the labia, now disused.
nal cases of contagion from examination have occurred.
men were mostly young, but there were none very young,
re was one whose age was stated as 49.

II.—CITY AMBULANCE ASSOCIATIONS.

R Alexander Young, M.D., Chairman of the Executive Committee
of the Edinburgh St Andrew's Ambulance Association.

ABLY the first organized attempt to render aid to the sick
unded originated during the Crusades, when orders of
llers were founded. At first the members were not nobles,
ertook the work from a benevolent spirit, and with the
render help to their fellow-men in the hour of need. As
nt on, these orders lost their original function, and became
knightly orders. Carlyle thus speaks of the beginning of
the proudest of these orders, the Teutsche Ritter of the
rden, founded in 1190 at Acre:—"A company of pious
ompassionate Lübeck ship captains, diligently forwarding
me Walpot von Bessenheim, a citizen of Bremen, taking
—formed themselves into a union for succour of the sick
ng, 'set up canvas tents,' medicinal assuagements, from

As in many other practical points, our American cousins have been ahead of us in the matter of ambulance organization. In the city of New York a complete ambulance system has been at work for some years. Dr Howard, well known as the introducer of a new method of artificial respiration, has devoted himself to this subject, and has done much to render first and speedy aid to the injured. The system is very complete, and fulfils its object admirably. Certain hospitals, which are in telephonic communication with the principal works and public centres, have an ambulance surgeon always on duty, and one of Dr Howard's ambulance waggons in readiness with a horse and man. When an accident occurs at any point, a telephonic message is sent to the hospital. A horse stands always partially harnessed, so that in a minute or two it can be yoked to the waggon. By the time this is completed the surgeon is ready, and jumping into the waggon it is rapidly driven to the place where the accident has happened. All street traffic gives way to an ambulance waggon, so that nothing can hinder rapidity of progress. Arrived at the scene of the accident, the surgeon renders first aid to the wounded person, if this has not been already done. For this purpose he has splints and bandages in a box under the driver's seat of the waggon. There are also different antiseptic dressings and restoratives in another part of the vehicle. The man being dressed is lifted on to the waggon stretcher and then put into the waggon, which conveys the patient to his own house or to the hospital.

This organization has been in operation in New York for some years, and also in Boston and Chicago, and is found to work well, and has done much good work.

This system has been introduced into England within the last year or two, in a modified form, by the London Ambulance Service, under the presidency of H.R.H. the Duke of Cambridge. "It has already supplied Howard's pattern of sick transport carriages to Stoke-Newington Police Office, to Fulham Police Office, and also to Lambeth Police Station. A hand-ambulance, covered in and built on Howard's system, has also been supplied to Stepney parish. But, unfortunately, the London hospitals have not joined in any way in the movement."[1]

In London the St John's Ambulance Association is doing much good in training men to render first aid to the injured. They have trained, in addition to artizans, railway men and policemen,—the two last being specially such as should receive instruction in ambulance work. The St John's Ambulance Association has branches or "centres" throughout the country.

I had last year an opportunity of seeing the ambulance in connexion with the Northern Hospital, Liverpool. A resident ambulance surgeon or substitute is always in attendance, and a Howard bulance waggon ready in a building behind the hospital. The n in charge has a house adjoining this building, and a horse kept harnessed with only the bridle to be put on when a sum-ons comes. The hospital being near the docks, the ambulance s plenty of work, and is found to be a great benefit to the ured, bringing them in in comfort and safety.

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[1] *Ambulance Organization, Equipment, and Transport.* International Health Exhibition Handbook. By Surgeon-Major G. J. H. Evatt, M.D., A.M.D.

In Scotland there has lately been great activity in ambulance rk. In Glasgow two years ago an association was formed called e St Andrew's Ambulance Association. Its objects are to train n connected with the different public works in first aid to unded, and to supply transport to sick and wounded. Classes ve been formed and lectures given throughout the city and dis-ct. After the course is finished an examination is held, and se gaining 50 per cent. and upwards of the available marks are titled to two certificates, one of which is small, and can be carried the pocket and produced when necessary to show that the holder a trained ambulance man. In most of the works in the city there e boxes containing first dressings, splints, etc., and a stretcher. hen an accident occurs the ambulance men in the work do what necessary for the temporary relief of the injured person; and if e distance to which the patient has to be removed is too far for m to be carried on a stretcher, a telephonic message is sent to the ntral office, where the ambulance carriage is stationed; and being ways in readiness, it is quickly at the point wanted, and the suf-rer is removed comfortably and expeditiously. The Howard rriage is largely used to convey cases of non-infectious illness to e hospitals from private houses. At term time the waggon is uch employed in carrying sick persons from one house to another.

This year a similar organization has been inaugurated in Edin-urgh, and has been affiliated with the Glasgow Society. The ty is divided into five districts with a committee of management r each; there is also a central executive committee. The classes ave been largely attended, 280 men and 4 women having taken e certificate, and much enthusiasm has been manifested. As yet ere is no ambulance waggon, but it is contemplated having one t a central point, with a hand-litter at each of the fire stations. he owners of works have in many cases supplied stretchers which re always in readiness at their works. It is proposed in addition the ordinary dressings to issue some simply applied antiseptic, so to render compound fractures aseptic without loss of time. lready many cases of injury have received first aid, and have been ken to the Royal Infirmary, where the surgeon in charge has ex-ressed approval of the manner in which the dressing and splints ave been applied, and of the care with which the removal of the atient has been conducted. St Andrew's Ambulance men have lso been employed to convey sick persons arriving from the untry, from the railway stations to their own houses, or from one ouse to another. The cases treated by ambulance men are always reported, and will, it is confidently believed, form an interesting record of the work of the society.

In Dundee, Dr David M'Ewan, surgeon to the infirmary, informs me a "centre" of the St John's Ambulance Association was formed at the beginning of this year. Classes were held for instruction in "first aid," and were very popular. There were 10 classes in all, 4 for women and 6 for men. They were attended by 621 pupils, 389 men and 232 women. For examination 286 men presented themselves, of whom 260 passed, and 98 women, of whom 81 passed. As a result of this movement, a large number of the mill-owners and others have provided for their works the necessary ambulance *matériel* for use in case of accident.

In Aberdeen no distinct civil ambulance organization exists, but Dr Angus Fraser tells me the police surgeon has given a course of lectures to the police.

It is evident that the advantages of the training given by the ambulance associations are great. When one sees the difference between trained and untrained men lifting an injured person one can judge of the benefit more readily. The comfort, as well as safety, to a man with say a compound fracture of his leg to be properly carried, cannot be over-estimated. I knew a colonel of volunteers who broke his leg by his horse falling while on parade. His men procured a stretcher, and with all the care they could command, but unfortunately it was untrained care, lifted their commanding officer on to the stretcher, but from awkwardness threw him twice out of the stretcher while carrying him home, much to the hurt of the fracture.

It is particularly necessary that railway employés should be trained in first aid, for from our railways comes a large proportion of our accidents. First dressings, an Esmarch band for arresting bleeding, and a stretcher, should be kept at all the principal railway stations. Policemen should also possess a knowledge of ambulance work, for they are the wounded and sick carriers of the community in most cases. It is to be hoped that the civic authorities will see to this, and encourage policemen by an addition to their pay to qualify as ambulance men.

But there is no class who may not at some time or other be called upon to assist injured people. The facilities offered for giving the necessary instruction are so numerous that no one need be without the required knowledge. While a little knowledge may be a bad thing, care is always taken in the lectures to warn all that they must not presume on their knowledge, but only to do what they know to be right, as laid down in the instructions for their guidance, and only till the doctor comes.

As a result of the ambulance movement, a non-medical passer-by instead of fainting at the sight of blood, or being a helpless looker-on, may prove "in need a friend indeed," by saving discomfort and pain, or even life itself.

III.—SPEAR WOUND IN THE ABDOMEN.

By George Mackay, M.B., C.M., M.R.C.S., House-Surgeon, Royal Infirmary,
President Royal Medical Society.

About mid-day on 3rd October 1883, G. E. M., æt. 22, while leading an exploring party in the mountains of New Guinea, was suddenly attacked by natives. At the time he was 100 yards ahead of his party, leading a pack horse up a steep slope, and was coming out from thick scrub into the open when he was struck down by two spears, thrown simultaneously by men standing apparently above, in front of, and to the right of him. He did not see the men. One spear entered at the side of the nose about ½ inch below the inner canthus of the right eye; the other pierced the abdominal wall about 2½ inches above the umbilicus, and 1 inch to the left of the middle line. Rising to his feet he pulled out the spears.[1] That in the abdomen came away much more readily than that in the face. The former left an apparently very trifling wound which scarcely bled at all, while the withdrawal of the latter was followed by a rush of blood, and the bleeding from the wound and right nostril did not completely cease for some hours. After pulling out the spears he had to lie down, and the rest of his party coming up found him partly unconscious, and drenched with blood. On attempting to rise he found that the left knee was slightly flexed, and that on taking a step he had to bend his body forward from the left groin. What he describes as "galvanic shocks," ran down the leg, especially on attempting to extend the foot. His men at once determined to abandon everything, and take him on horseback down to the mission station on the sea coast, 105 miles distant. He was lifted on to a horse, but could not ride far in the saddle. He vomited a large quantity of thick clotted blood, and had intense griping pains in the belly. Towards evening he became unconscious, and remembers nothing more of that night. Slept without shelter.

4th Oct.—Rode all day in great pain. "Shocks" very marked. Once while sitting in the saddle he had a sensation in his left leg as though a "nerve had been drawn out like a bow string, and suddenly let go." He says he heard it distinctly, and that it was accompanied by a "galvanic shock" down the leg. He felt dazed all day. He ate nothing. Had great thirst, but found that if he drank water it set up griping. No shelter at night.

5th.—His mouth broke out, and was very sore both inside and on the lips. He had to lie down most of the day, while his men were cutting a track through the forest. The weather was very cold and damp, and he had neither blanket nor sheets. He ate nothing.

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[1] The spears were about twelve feet long, made of wood sharpened only at the point.

6th.—The lower part of his belly to the left was swollen and yellow, and walking was painful. The wound in the abdomen was closed up, but the horse falling with him the wound opened, and pus began to trickle down. Stooped very much; same shocks; mouth very sore. For nourishment ½ pint coffee, ¼ pint Liebig, 3 little fancy biscuits. No shelter.

7th.—Pus still trickling. Had to walk 3 miles because horse knocked up. Mouth very sore. Night cold. No shelter. Some coffee and a little Liebig.

8th.—Pus stopped trickling, and wound closed. Left side of his face benumbed and paralyzed (opposite side to that injured); complete loss of power over left eyelid. Left eye protruding. Ate nothing. Drank plenty of water. Rained all night.

9th.—Left leg becoming fixed in flexed position. Face bad. Very hard work this day. Took ½ pint coffee and a few wet biscuits.

10th.—Shot a duck, and had a pint of soup.

11th.—Shot six ducks, and had giblet stew. Left leg almost useless. Right half of mouth showed signs of healing.

15th.—Carried into Port Moresby.

15th to 29th.—He was in Port Moresby. The right half of his mouth healed up, but the left (the paralyzed) kept sore. The numbness in his left cheek did not improve, and he did not regain power over the eyelid. His leg was so shrunk up and contracted that he could hardly walk. The sinews seemed corded together under the knee. He took 40 or 50 minims of laudanum every other night to put him to sleep, and on the evening before leaving he had such acute pain in the front of his thigh that he took 100 minims and finished his supply. That was the last pain worth speaking of that he had in his leg for ten weeks. He could still feel the "shock" from his instep when he used the flexors of his foot. He was very thin. His normal weight is over 11 stone. In Port Moresby he weighed 7 stone 2 pounds.

During the time he was in New Guinea before the accident he enjoyed excellent health. All his men were knocked down by fever and ague, yet he never had a trace of it. They lived on the roughest fare—salt packhorse and native yams.

The soreness about the mouth from which he was suffering at this time was probably scorbutic, and the improvement which set in as soon as he got fresh meat (duck) to eat tends to confirm this view of its nature.

30th Oct. to 20th Nov.—He was in a small schooner trying to make Queensland. At end of first week, having been anchored for some time under the lee of a mangrove swamp, developed fever and ague, and from this time had it more or less severely every other day till after his arrival home. Got heavier by 15 pounds on voyage despite fever. Could use his leg without suffering much pain, though it was shrunk up as before. Just before reaching Queensland mouth healed up, feeling returned to his face, and he could se his left eyelid.

20th.—Arrived in Cooktown. Saw a German doctor, who tried straighten his leg by kneeling on it.

20th Nov. to 7th Dec.—He was in Cooktown, and on steamer ing south to Melbourne. Fœtid discharge from posterior nares en so objectionable that he had to keep by himself. On 25th ov. he blew a splinter of wood out of his nose about ¾ inch long, inch thick (right nostril). His leg was better, but he was very eak from fever and ague. Took no medicine.

8th.—Reached home and saw the family doctor, who treated him r fever with quinine. Gave him borax to snuff up his nose; id leg would get all right—slight sprain.

16th.—Fever disappearing. Drew doctor's attention to painless elling in left buttock. He said it was *muscular* and would get ell of itself.

6th Jan.—Blew another splinter out of his right nostril, as long ut not a quarter as thick as above.

15th.—Discharge from nose had become unbearable. He consulted an oculist, who probed his nostril, and could feel at the back tiny splinter, which he was told was bound to work out.

18th to 28th.—Suffered much from fever and ague, and last four ays great pain deep down in left buttock.

28th.—Saw Mr T. N. Fitzgerald, the leading Australian surgeon. aid buttock would require lancing, but patient was too weak. ave him liniment of belladonna and opium.

2nd Feb.—Mr Fitzgerald pricked in two inches with a lance and moved a wineglassful of pus. Gave great relief. Discharge from ose unbearable.

19th March.—Spoke to Mr Fitzgerald for the first time about is nose. This surgeon examined his throat with a speculum, saw, d extracted from the posterior nares (right nostril) a splinter, hich was impinging on the spine, being wedged in between the st and second cervical vertebræ. Considerable force had to be ed in pulling it out, and the operation was a very painful one. he splinter had been in 169 days. It was, so far as he can member, a tapering piece of wood, about 2 inches long, by ¼ ch in diameter at its thickest part. Immediately after, it was und necessary to lance the left buttock a second time, when more s was removed, and relief given.

27th.—Left for England in the same steamer with Mr Fitzgerald. ad severe rigors constantly.

10th April.—Mr Fitzgerald detected the presence of a foreign dy, by means of a probe passed into the left buttock.

17th.—He was put under chloroform. Mr Fitzgerald cut into e buttock, and finding a sinus leading into the pelvis, cut along and came to a large sac of pus. This was drained out, and xt day a little splinter came out, proving correctness of diagnosis.

14th May.—Arrived in England. Wound had been syringed out daily with carbolic lotion, and the sinus still remained.

20th.—Admitted to Students' Ward, Royal Infirmary, Edinburgh. General health good. He walked lame with the left knee slightly flexed, and the body a little bent forward on the thigh. There were various aberrations of sensation in the left leg, numbness in the calf, occasional darting pains in the instep, and a burning pricking sensation in the upper and outer part of the thigh on raising his leg. On examination of the left buttock a sinus was found, admitting readily a No. 8 gum elastic catheter its whole length of 12 inches. A long rigid probe, when suitably bent, could be passed in for an equal distance, and the tip of it could be indistinctly felt on palpation through the abdominal wall in the left iliac region. The discharge from the sinus was inconsiderable, viscid, and glairy. A solution of corrosive sublimate, 1 to 2000, was injected into the sinus through a catheter, and it was found that the fluid returned when the catheter was passed in 8 inches or less, but if further than this the fluid was retained, and a gurgling sound could be heard in the abdomen. Anteriorly on palpation an unusual fulness and hardness could be felt in the left iliac fossa, which was quite free from pain, but pressure over the inner part of it gave rise to the same burning sensation in the thigh as he experienced on raising the leg. No foreign body could be felt, and as there was thus no distinct indication for operation, Professor Chiene determined to wait and see what would be the effect of simple rest. For the first ten days the gluteal sinus was syringed out daily with weak corrosive sublimate lotion. This, however, was discontinued on the patient's complaining of pain in the abdomen and sickness after syringing. He appeared to improve under rest, and his leg becoming straighter, he was able to walk more easily, but very slight exercise brought on a return of the lameness, and from 23rd to 27th June he suffered intense burning pain in the left thigh, and the abdominal tenderness was greatly aggravated. Professor Chiene now determined to operate, and his decision was supported by Mr Joseph Bell. Accordingly on 1st July Professor Chiene, assisted by Mr Bell, made an incision above Poupart's ligament as if to tie the external iliac artery. (This was the very incision which Mr Fitzgerald was anxious to make on board ship, but was prevented by an epidemic of scarlet fever, and the want of antiseptics.) The vessels were seized as cut until the peritoneum was exposed. A long probe was now passed into the gluteal sinus and pushed on, until the point could be felt through the anterior abdominal wall about one and a half inches internal to the incision. This being used as a guide, Professor Chiene proceeded to dissect cautiously through the extra peritoneal fat, working chiefly with the finger. There was considerable matting of the tissues, but at length the end of the probe was exposed. The opening was enlarged, the probe ithdrawn, and on introducing the finger the rough end of a hard ody was felt. It was firmly embedded in the substance of the liacus muscle, a little external to the external iliac vessels, and irected obliquely downwards and outwards. It was now seized ith a pair of dressing forceps and withdrawn with some difficulty. t was found to consist of a tapering piece of fibrous looking wood, rregularly broken at both ends, the fracture at the narrow end eing incomplete, having a fine projecting spicule ⅜ of an inch in ength, which appeared to represent a portion of the extreme tip f the spear. The total length of the fragment was 3 inches, the iameter at the thick end ⅜ inch, at the narrow end ¼ of an inch. ts appearance is figured in the accompanying woodcut. The

ctual tip was not present, but no further fragments could be etected in the cavity. The cavity was syringed out, a drainage be inserted, and the wound sewed up.

During the first twenty-four hours the patient suffered much om shock and afterwards from severe griping pains, due to atus of which he was unable to relieve himself. Relief was fforded by the passage of a large sized flexible catheter per anum to the upper part of the rectum. On the fourth day the wound as dressed and found to be septic, probably due to its communica- on with the posterior gluteal sinus. The tube was removed and e wound injected with corrosive sublimate lotion, and dressed ith boracic lint poultice covered with a charcoal pad. This was peated thrice daily, and by 12th July the discharge was quite eet and the wound healing well. The gluteal sinus was found be closed on the second day after the operation. His further ogress, locally and generally, was very satisfactory; on the 16th s bowels began to move naturally and regularly. On the 27th, hile syringing out the wound a little fragment of wood, ⅝ of an ch in length and ⅛ inch in diameter at its thickest end, was ashed out. It appears to have belonged to the tip of the spear, ough not altogether completing it. It is also shown in the above oodcut. After this the wound went on closing rapidly, so that on h August, when he left for the country, only a little sinus was left, ong which the probe could be passed for 1½ inches outwards and ckwards. He could flex the thigh readily and without pain. is leg was no longer bent, and he walked firmly but with a ightly rolling gait. On 17th August he wrote saying that the ound was soundly healed, that he was gaining strength daily, and uld walk and run easily. His general health was excellent; and e operation appears to have afforded him complete relief.

IV.—A FRACTURE OF SKULL OF MEDICO-LEGAL INTEREST.

By T. GOODALL NASMYTH, M.B., Cowdenbeath.

ON Sunday morning a man, A. F., was found lying dead at the side of a disused toll-house near to an inn. When found he was cold and stiff, his clothes soiled and saturated with water. The night was a terribly stormy one, and during that night a great many deaths from exposure occurred, as we read in the newspapers. I saw the body, and differed from the expressed belief of those who found it that death was due to exposure; and my grounds for this belief were the following:—

I was informed casually that on the Saturday night a man had fallen downstairs in the inn near to where this man was found; that he was insensible for a time, and blood came from his nose and ears or ear; and on inquiry I found that this man was A. F. I further saw that there was clotted blood in his left ear, marks on his face, and that the pupils of both eyes were widely dilated. I refused to certify the death; the case was duly reported, and I was instructed to make an examination of the body; and the following are the notes of the case:—

Body said to be of A. F., a miner, aged about 40; height, 5 feet 10 inches; body cold; rigor mortis marked; face scratched over left cheek bone; blood in left ear; pupils widely dilated. On dissecting back the scalp, found extensive effused blood over left parietal and temporal bones. Knife grated against the skull, and on investigating a fracture of skull was found. I removed skull-cap, and found extensive effusion of blood, corresponding to situation of left parietal and temporal bones, and reaching up to longitudinal suture of skull. On removing brain, found effused blood at base, reaching forward to anterior lobes, posteriorly to medulla, and between the cerebrum and cerebellum. The fracture could now be seen distinctly, and was quite open at one place, allowing a scalpel to be inserted into the opening, and to pass into auditory meatus. The course of the fracture was this:—Beginning in the petrous portion of the left temporal bone, near to the articulation with the sphenoid, passed into the auditory meatus, right across the squamous portion of temporal bone, up through the left parietal, and backwards in an irregular curved course. The total length, as nearly as could be measured, was about 8 inches.

After sending in my report to the authorities, I was asked to give an opinion as to the cause of this fearful injury, and the following evidence was submitted to me:—A. F. had fallen from a height of about 6 feet, on the Saturday night, in the inn; he fell face forward, and his face or head alighted on the hard stone floor. He lay insensible for some minutes, but regained consciousness so far, and was able to walk with assistance to one of the rooms in the inn, where cold water cloths were applied to his head, and in a short time he was able to converse and smoke a pipe. He remained in this condition for at least an hour and a half, and at the closing hour he left with others who were in the house. It was noticed that he stumbled and fell, but was able to get to his feet again. No subsequent history could be obtained, and the finding of his dead body is the next point in the evidence.

The points of importance in the case are:—1st, The length of time the man lived after receiving his extensive and deadly injuries, taking for granted that the fall down stairs was the cause; 2nd, The stage of unconsciousness after the fall, regained consciousness, again passing into the insensibility which preceded death, evidenced by stumbling and falling as he left the inn.

The explanations of the above points I take to be the following:—

The severe fall caused, in the first place, concussion of the brain, as well as fracture of the skull. This concussion explained the first unconsciousness, and as it passed away he returned to his senses, and then the effects of the fracture began, viz.:—Hæmorrhage, which from the free openings of the fracture into the ear, and under the scalp textures, could escape externally, so that at first the brain was not pressed on; as the blood accumulated under the scalp it gradually offered resistance to the external hæmorrhage, and clotting occurring in the auditory meatus, stopped this outlet, so that the full effects of the pressure would now be exerted on the brain, and the stumbling and fall at the inn door were the first symptoms of this; then the gradual increase of blood, at last reaching the medulla, as the clots there showed, put an end to existence.

V.—RECORD OF CASES TREATED IN WARD XXVIII., ROYAL INFIRMARY, EDINBURGH, FROM 1ST NOVEMBER 1883 TO 30TH APRIL 1884.

By ANGUS MACDONALD, M.D.

(*Read before the Edinburgh Obstetrical Society, 25th June* 1884.)

THE following cases have been compiled with great labour for me by my friend and Infirmary assistant, Dr Brewis. To him is due the credit of carefully abstracting them from the extended form in which they are contained in the Ward Case-Books. I myself have done little more than read over the abstracts and write out such remarks upon them as they seemed to suggest. They are presented in the hope that they may not be uninteresting to the members of the Society.

GROUP A.—FIBROID TUMOURS OF THE UTERUS.

Of these there were five cases. Two were successfully removed by operation. The other three were subjected to palliative treatment, as they appeared unsuitable for operation.

CASE I.—A. L., æt. 36, unmarried, was admitted into Ward XXVIII., on 5th Nov. 1883, on recommendation of Dr M'Lelland, Alexandria, complaining of a swelling in her abdomen. Patient always enjoyed good health till three years ago, when she felt a severe pain in her back, which lasted only three days. Twelve months before admission the same kind of pain returned; since that time it has been constant. The pain induced her to go to the doctor, who told her there was something wrong with her inside and advised her to go to the hospital.

Condition on Admission.—Abdomen distended to about the size of a seven or eight months' pregnancy, but somewhat irregularly so, the long end of the oval passing obliquely upwards from left to right, from middle of left Poupart's ligament to tip of last rib on right. Tumour is perfectly movable. Percussion is uniformly dull anteriorly, resonant on both flanks, especially on the left. On the right the tumour feels solid; on the left something like obscure fluctuation is present. In front, a soft flat cyst containing fluid can be distinctly felt, and it is freely movable over the surface of the solid mass behind. On auscultation an impulse is communicated to the ear from all points of the surface of the tumour. On the lower aspect anteriorly a distinct bruit is audible synchronous with the heart's first sound.

P.V.—Hymen is persistent, pelvis empty, and the vaginal portion of the cervix is represented by a button-like nodule of firm tissue. From this nodule the thinned elongated cervix can be felt extending upwards to the tumour, a distance, as measured by the sound, of between 2 and 3 inches.

23rd Nov. 1883.—Dr Macdonald opened the abdomen. There were no adhesions whatever. Before the tumour could be removed the incision had to be extended gradually from the symphysis pubis to 1½–2 inches above the umbilicus. Both ovaries were high up and placed, the left anteriorly and the right posteriorly, behind the tumour. There was a marked twist from left to right forwards the amount of rotation being quite ¼ of a circle. The neck was elongated and formed a fairly good pedicle. This was embraced in a Tait's clamp and secured. The tumour was now cut off abou an inch above the clamp. The end of the stump did no bleed at all. A further portion of the stump was removed by scissors. The abdominal wound was now secured by 13 deep and numerous superficial sutures. A piece of protective steeped in carbolic lotion was placed over the wound, and a mass of salicyli wool secured by bandages over the abdomen, and the patient wa put to bed and attended to in the usual manner.

Time of operation as follows:—

Opening abdomen, . . .	3 minutes.
Removing tumour and adjusting clamp,	12 „
Sewing up abdomen,. . .	45 „
Total,	60 minutes.
Weight of tumour, . . .	10 lbs.

The patient made an uninterrupted recovery. The highest temperature registered during the convalescence was 99°·4, which occurred at 11 A.M. on 24th Nov. and 4 P.M. on 25th Nov. Pulse average was 65. Over the stump a little powdered iodoform was sprinkled. No opium was administered. The bowels were moved by castor oil, for the first time, on 1st Dec. The deep stitches were removed on the 9th day, when complete union by first intention was formed throughout.

The superficial stitches were taken out on the 11th day.

The clamp separated on 26th Dec. 1883.

24th Jan. 1884.—Wound quite healed. P.V.—End of vagina could not be reached. Patient discharged.

The operation in this case was necessitated through pain occasioned by the rapid growth of the tumour. There was no trouble from bleeding. The medical attendant who sent the patient into hospital reported that the tumour appeared to him to double its size in the course of two months. The main bulk of the tumour was made up of fibroid degeneration of the anterior wall of the uterus, the body of the organ being wound round its posterior surface. The marked twist in the tumour is of importance in its bearings upon the treatment of removal of the ovaries for the purpose of arresting the growth of fibroid tumours. Whilst the left ovary could have been easily removed, it would have been completely impossible to reach the right. Before proceeding to operate, we had made clearly out that the tumour was clear of the pelvis and had an elongated cervix, two points of the greatest importance in facilitating the operation. The loss of time which occurred in sewing up the abdominal wound arose from efforts to secure as completely as possible the lower angle of the wound below the pedicle. In attempting to do this the needle broke and led to considerable delay.

CASE II.—M. B., æt. 54, admitted 21st Feb. 1884, on recommendation of Dr R. Bruce, Edinburgh, complaining of a swelling in her abdomen and of pain in the swelling. Patient first noticed a lump in her abdomen eight years ago; since that time the lump has gradually increased in size, and during the three weeks previous to her admission it has rapidly grown much larger, and feels harder, and more pain is present. Patient also states that for two or three weeks before admission she has passed less water than previously, and that there has been a disagreeable pain present in her back.

Condition on Admission.—Abdomen is occupied by a large tumour distended to the size of a full-term pregnancy. Tumour is hard, movable, rounded, smooth, and oval in shape. Friction is heard anteriorly; a soft bruit is audible synchronous with first sound immediately above pubis in the mesial line. Measurement round the most prominent part of the tumour (3½ inches below umbilicus) 47½ inches.

From right ant. sup. spine of ilium to umbilicus,	8¾ in.
„ left „ „ „	9 „
„ umbilicus to pubis,	9 „
„ „ „ ensiform cartilage,	9 „

All over surface of tumour percussion is dull, and the flanks clear. The note is also clear between the ensiform cartilage and the upper border of the tumour.

P.V.—Vagina rather narrow and elongated. Cervix can be felt with extreme difficulty at the upper end of the vagina on a level with the upper edge of the symphysis; no part of the tumour can be felt per vaginam, but only one finger can be passed into the latter. Sound enters upwards and towards right 3 inches.

Urine passed in twenty-four hours, ℥24, containing albumen, blood, pus, renal epithelium, and blood casts. The patient was put on milk diet; the quantity of urine increased to ℥50 during the twenty-four hours, and the week before she was operated on only a trace of blood and albumen could be detected.

On the 4th April Dr Macdonald performed laparotomy. The peritoneum was speedily reached; on passing the hand round the tumour it was found to be free from adhesions. The uterine tumour had so developed as to bring the left ovary forwards and upwards as high as the umbilicus, thereby producing great tension of the left broad ligament. The incision was gradually increased by ¼ of an inch at a time upwards until the tumour could be pushed through. It was then found that the tumour had a very short, thick pedicle; round this was passed a Tait's clamp, which was securely tightened. The tumour was now cut off about an inch above the clamp; the hæmorrhage was found to be completely arrested by the clamp. The abdominal incision was now brought together by deep and superficial stitches. The superfluous tissue of the pedicle was cut off by scissors, and the stump dressed by being freely dusted over by a mixture of equal parts of bismuth and iodoform. The rest of the wound was covered by a layer of protective. The woman was then put to bed, and had a brandy enema administered.

The patient made an excellent recovery; highest temperature reached was 99°. She passed wind on the third day; bowels were moved on the 8th day after castor oil had been given. Deep stitches were removed on the 7th day; clamp was removed on 30th April. Tumour weighed 9 pounds.

In this case also the operation was required on account of the bulk and rapid growth of the tumour. It was found to be developed in the posterior uterine wall, the body of the uterus being stretched over its anterior surface. For similar reasons removal of the right ovary, which lay behind the tumour low down, would have been impossible. There were several considerable cavities developed in this tumour, indicating its tendency to fibrocystic change. It is also to be noted that the pressure of the tumour appeared to have been causing renal disturbance. At any rate, when the patient came in, there was scanty urine containing blood-casts and albumen. Rest and appropriate treatment speedily rendered the urine both plentiful and healthy. The pedicle in this case was exceedingly short, and as the patient's abdominal walls were very thickly covered with adipose tissue, the clamp sank deeply into it, and on the left and right sides caused a certain amount of ulceration. But on removal of the clamp these symptoms rapidly improved.

The difficulties associated with the external method makes one sigh for a reliable internal method in this operation. But the risks of bleeding and of infection are so great that I have not seen it advisable to attempt the internal method so ably and successfully practised by Schrœder.

Case III.—M. A. M'B., æt. 51, admitted 9th Jan. 1884, complaining of enlargement of abdomen. Patient has not menstruated during the last seven years, but her abdomen has been gradually increasing in size. Appears in good health, apart from the inconvenience of the tumour.

Condition on Admission.—The abdomen is occupied by a more or less rounded, movable, resistant, hard tumour. Abdomen at widest girth measures 39½ inches. Percussion absolutely dull up to 1¼ inch below umbilicus; in both flanks note is clear. Auscultation gives negative results.

P.V.—The posterior part of the pelvis and a great part of the inlet is occupied by a large tumour, soft anteriorly, hard posteriorly. Arching in a semilunar manner in front of the most anterior part of the tumour is a thin valve-like tissue, which seems to be the thinned anterior lip of the cervix. Using this as a guide the sound passes up towards the right 3¼ inches.

This case admitted of no surgical treatment, more especially as there was no hæmorrhage to complain of. Patient was dismissed on the 24th Jan. 1884 *in statu quo.*

Case IV.—J. D., æt. 43, admitted 15th Feb. 1884, complaining of a tumour in her abdomen. Patient first noticed tumour four years ago. It has grown slowly, and has not been increasing lately. Menstruation was profuse, but is not so much so now as it was nine months ago.

Condition on Admission.—The lower part of the abdomen is projected by a tumour of uneven outline, which extends as high as the umbilicus. It is firm, not tender, and freely movable. On the lower part of the tumour a bruit synchronous with the heart's sound is audible. The girth round the most projecting part of the tumour is 34 inches.

P.V.—The cervix is undone. A rounded tumour occupies the posterior part of the inlet continuous with the tumour in the abdomen, and moves with it. In front of the os there is also projecting into anterior part of the pelvis a rounded mass similarly related to the tumour. The sound enters upwards and forwards barely 3 inches without pain. The patient is rather anæmic. Patient was ordered ergotine suppositories and a chalybeate tonic, and after a rest in hospital was dismissed on 23rd March 1884 as an unsuitable case for operative interference.

CASE V.—Mrs M., æt. 48, was admitted on 9th April 1884, complaining of a continued sanguineous discharge and pain in her back. Her illness dates from a miscarriage she had seven years ago. Patient has had six children and two miscarriages.

Condition on Admission.—Patient is very *anæmic* looking. A systolic murmur is present in all the cardiac areas.

Physical Examination.—Abdomen occupied inferiorly by a rounded, movable, almost fluctuating tumour, which extends 5 inches above the upper edge of the symphysis pubis. The tumour is more developed towards the left than towards the right, although on the whole it is centrally placed. Bruit is heard immediately above symphysis.

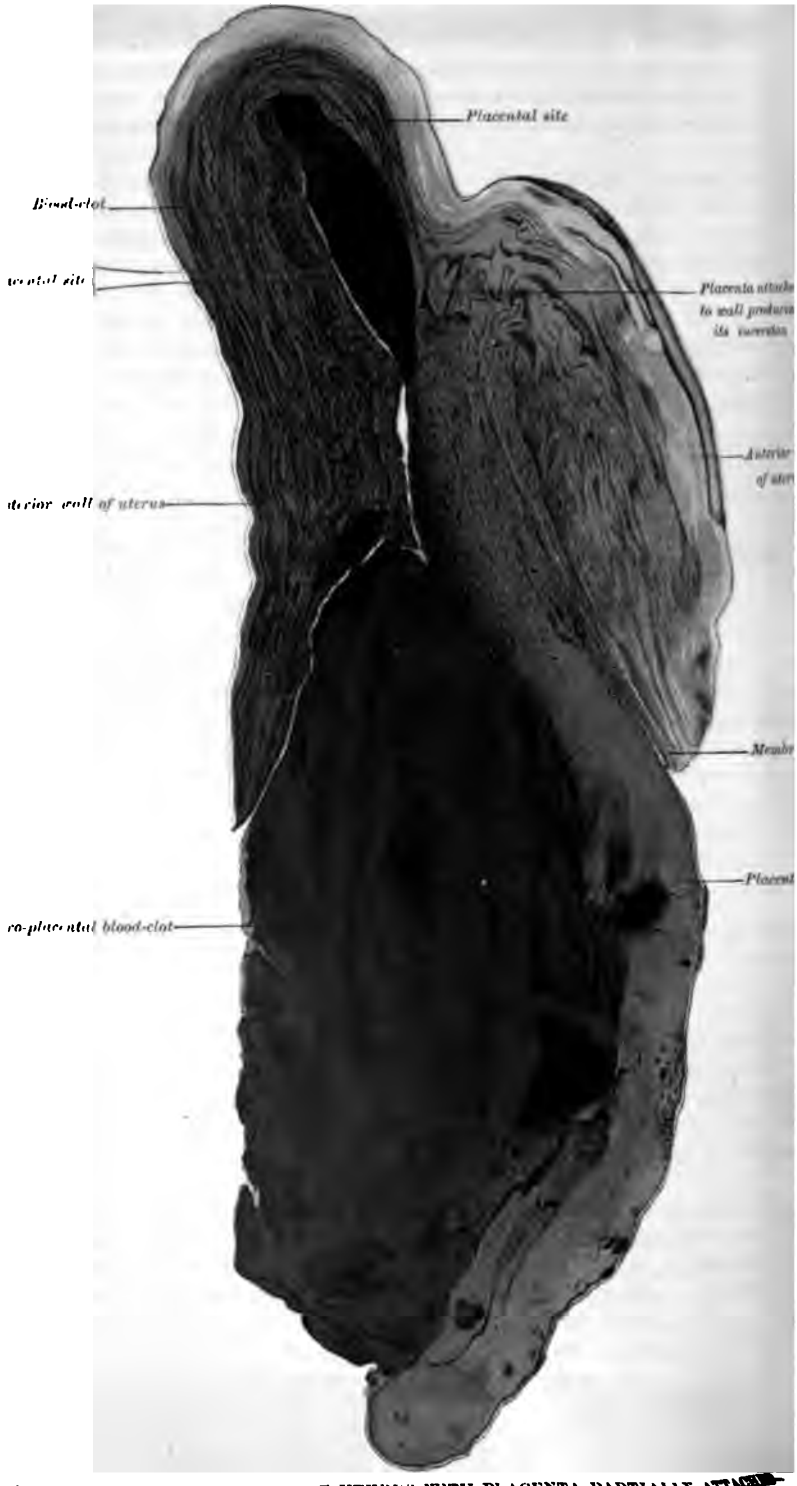
P.V.—Cervix reached with some difficulty. It is considerably undone, the lower os being traversable to the examining finger, which passes in 1¼ inch. Cervix passes right into tumour, which is movable. No part of tumour is contained in the pelvis.

23rd April.—Patient left hospital owing to domestic affliction.

The above cases differed very considerably in symptoms and condition. In Case III. there was no hæmorrhage, but the patient applied for relief on account of the bulk of the tumour. There was, however, no evidence to show that the mass was growing fast, and the absence of a bruit indicated no great vascularity in the mass. The difficulty and risks of removal when the cervix was undone, and the tumour was found to grow so deeply between the layers of the broad ligament, appeared to me so great that I declined to interfere by operation, and accordingly the patient left. I have not heard from her since.

Indeed, such cases present nearly insuperable difficulties to removal, partly because there is nothing from which to make a pedicle, and partly on account of the enormous adhesions which are found round the mass when the broad ligament is opened up by the downward and outward growth of the tumour.

The same remarks apply to Cases IV. and V., only that in regard to them the bleeding was an urgent symptom.



VERTICAL MESIAL SECTION OF UTERUS WITH PLACENTA PARTIALLY ATTACHED

from a case of abdominal section for hæmorrhage during labour.

But in Case IV. the hæmorrhage, though still present, appeared several months past to be steadily diminishing. Accordingly, ontented myself with recommending ergotine and iron in the e that the patient's strength might be kept up until the meno- use was fully established, when there is every reason to expect tumour would shrink and give little further trouble.

ut Case V. presented such distressing bleeding that operation s seriously contemplated. The case, however, did not present ood one for hysterectomy, as though there was no pelvic adhesion no considerable opening out of the broad ligaments, the length he cervix was so encroached upon as to render it all but impos- le to get such a pedicle as a clamp could secure. Accordingly, ad made up my mind to try the effect of removal of the ovaries the hope of inducing a premature arrest of menstruation, and is removing the most pressing symptom, viz., dangerous flooding. e sudden illness of a daughter of the patient led her to leave hospital unexpectedly. She was to return if the bleeding con- ued to be serious. Meanwhile she was to employ ergotine and inine pills, but she has not as yet applied for readmission.

—THE ANATOMY AND RELATIONS OF THE UTERUS URING THE THIRD STAGE OF LABOUR AND THE IRST DAYS OF THE PUERPERIUM.

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(*unicated to the Edinburgh Obstetrical Society*, 12*th March and* 16*th July* 1884.)

(*Continued from page* 237.)

III.—*Uterus with Placenta attached in part, from a Case of Abdominal Section for Hæmorrhage during Labour.*

the case from which this preparation was obtained, severe orrhage came on during the first stage. When the patient already moribund, abdominal section was done with the hope etting a living child.

he fresh preparation consisted of the upper two-thirds of the y of the uterus, with the placenta and a large blood-clot pro- ing from the amputation wound. It was laid in a piece of n to keep the parts together, and placed first in spirit and er, and then in strong spirit. Sections were cut and mounted n the former cases. Before cutting them, it was noted that the us had retracted so that much more of the placenta was ex- ed, and that there was a depression now in the uterine wall ch was not observed formerly.

a.) NAKED-EYE SECTIONS.—Plate IV. is a faithful representation h as regards drawing and colour of one of the mounted sections;

and I am glad of this opportunity of acknowledging the trouble which Messrs W. and A. K. Johnston have taken to reproduce these sections *ad naturam*.

The *placenta* measures 6 in. (15·3 cm.) vertically, 2½ in. (6·5 cm.) being covered by the uterus, and 3½ in. (9 cm.) exposed; antero-posteriorly it varies from ⅜ (1 cm.) to ½ in. (1·3 cm.) in thickness. Its upper border is still attached to the wall of the uterus; the rest of it is free and is moulded upon a large blood-clot which measures 4 in. (10·2 cm.) vertically, and 1½ in. (3·8 cm.) antero-posteriorly at its thickest part. The clot has a well-defined outline; and on its free surface there is seen here and there (thoug this does not come out in Plate IV.) traces of a delicate band o paler tissue (placenta materna ?) which passes into the tissue of th placenta at the lower corner of the clot. The fœtal surface of th placenta is covered with the amnion.

The *uterine wall* is inverted at the point to which the placent is attached, there being a furrow about ⅜ in. (1 cm.) deep on th peritoneal aspect. In front of this lies 2½ in. (6·5 cm.) of uterin wall, which is lined by the membranes; behind it is 5 in. (12·7 cm to which the placenta has been attached, and which is folded o itself at a point about 1 in. (2·5 cm.) posterior to the inverte portion. The examination of other sections shows that the uter is everywhere lined by the membranes, and that though the pl centa is only adherent along its upper margin to the uterine wa the blood clot does not extend beyond the placental site, so as separate the membranes from the uterine wall.

(*b*.) Microscopic Sections.—Sections of the anterior uteri wall show first the *Amnion*, which is about ·002 in. (·05 mm.) thi and is at some points apposed to the chorion, at others detach and thrown into folds, as described in Prep. I. Below it is t *Sub-amniotic layer*, which, where not broken up, appears about t same breadth. The *Chorion* and *Decidua* are detached at poin the separation taking place in the spongy layer of the latter. is difficult to trace the line of demarcation between them, but t two together when detached form a layer about ·012 in. (·3 m broad. The reticular character of the spongy layer is w marked; some of the spaces contain a *débris* of cells. At one two points this layer is broken up with hæmorrhages.

This Preparation shows (1.) A large retro-placental hæmorrha (2.) A placenta still attached to the uterine wall at one poi (3.) A partial inversion of the wall at this point.

It is a beautiful example of a *retro-placental hæmatoma*, such Schultze and Ahlfeld would describe as physiological, but patient died and died *from hæmorrhage*. It is a *pathological* p paration. It is worthy of note also that though there has b this extensive hæmorrhage, the membranes are not detach Ahlfeld would probably explain this by the fact that the adher margin of the placenta prevented the blood from escaping exc e lowest point. But the placenta is only adherent at its upper in; the blood has not separated the membranes even at the of the placenta.

en this preparation, where there was hæmorrhage, does not rt the view that the separation of the membranes is effected e effused blood being forced between them. It is no doubt nteresting to say that "there is no better method of separating without injuring it than to drive fluid between the layers," is questionable whether nature would expend blood on this ss.

placenta is *attached at its margin* to the uterine wall. It is l-known clinical fact that when portions of placenta detach emain in utero, they are usually from the margin.

inversion is probably a post-mortem occurrence. The way ich the preparation was kept would prevent the weight of acenta and clot from dragging in the uterine wall; the uterus have become retracted off the placenta, partly by muscular ction, and partly by shrinking in the strong spirit. We see he mechanism by which adherent placenta produces inversion living subject. It may be that the traction on the cord is e only factor; the uterine effort to expel a partially detached nta may start the process, and this is easily completed by on from below, which does not imitate the natural mechanism aration as Credé's method does.

PRACTICAL DEDUCTIONS FROM PREPS. I., II., III.

following deductions may be fairly made with regard to the anism and management of the third stage; they are only ional, as the preparations are too few to reason from.

(a.) MECHANISM.

membranes are *detached* to a certain extent by the con-on of the uterine wall resulting from the escape of quor amnii and fœtus, and probably still further by the ing of the folds of membranes against one another and the ta during subsequent uterine contractions; their *expulsion* is d by the placenta dragging them after it as it is expelled. the membranes do not rupture during the first stage, this s will of course be modified.

membranes usually separate through the spongy layer, part ich remains inside the uterus. I think, however, that the ance of this spongy layer as favouring the tearing away of embranes is exaggerated by Langhans. A large proportion spaces are artificial structures produced by the tearing up tissue; and the reticular appearance of the decidua on the n, after expulsion of the membranes, must be due to these as to the torn through glands. The plane of separation seems also in different cases, and will be affected also by pathological conditions, which may explain the discrepancy in the results of different investigators: in one of Friedländer's cases, in which the separation took place through the compact (cellular) layer, he says that labour had gone on for several days, and the mucous membrane showed indications of commencing puerperal endometritis.[1]

The *Placenta* is *detached* by the uterus contracting on it as a foreign body; when it has been situated on the anterior or posterior walls, as is usually the case, it is *expelled* edgeways, as Matthews Duncan has described (*v.* Fig. 1, A), the edge being in the line of least resistance (*v.* p. 237).

When the placenta is situated on the fundus, a portion of its fœtal aspect will correspond to the line of least resistance, and it may then be expelled with the fœtal surface first, and folded towards the maternal surface as Schultze has described (*v.* Fig. 1, B); whether this is the case, and whether under these circumstances a retro-placental hæmatoma forms, cannot be settled until there has been described a section of a uterus with the placenta attached to the fundus.

(*b.*) MANAGEMENT.

The practical inferences may be thus stated:—

1. As the detachment of the placenta is not due to alterations in the placental site, but to the general pressure of the contracting uterus on the placental mass, *Credé's method of delivering the placenta imitates the physiological one.*

2. As the separation of the membranes is a gradual process, the membranes being first folded inside the uterus and remaining attached over a considerable area of the uterine wall, Credé's method, when carried out too early or forcibly, will be injurious; as it may expel the bulky placental mass, but leave the membranes where still firmly attached.

3. The separation of the membranes taking place along two planes, in the subamniotic and spongy layers, the presenting bag of membranes may be formed of the amnion alone.

Credé's method of delivering the placenta has given rise to a great deal of discussion, which is partly due to the fact that it has been misrepresented or misunderstood. In a recent paper,[2] called forth by Ahlfeld's attack on his method, he has described his method more fully as follows:—

> "As mentioned above, this principle comes foremost in my method, viz., to leave the delivery of the placenta as far as possible to the natural powers of the uterus, and to abstain from all internal manipulations through the genitals. But to anticipate the possible danger, viz., profuse hæmorrhage, which easily arises from the parturient woman through the placenta remaining too long in the uterus, I advise that, from the birth of the child onwards, the uterus be

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[1] *Physiologisch-anatomische Untersuchungen über den Uterus.* Leipzig, 1870, p. 15.

[2] "Abwehr gegen Ahlfeld's Berichte und Arbeiten, etc.," *Archiv f. Gynäk.*, Bd. xxiii., s. 304.

continuously controlled with the hand laid on it; and the third stage shortened in this way, viz., the natural contractions of the uterus are strengthened by

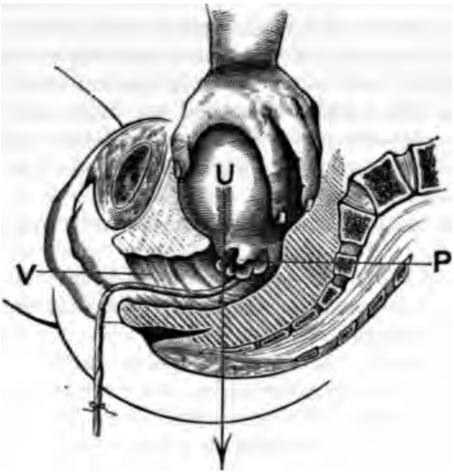


Fig. 3.—Credé's method of delivering the placenta: U, uterus; V, vagina; P, placenta; the arrow indicates the direction of the pressure towards the sacrum.

gently and *softly* rubbing it with the hand, and the contractions which are too long absent are artificially excited. As soon as the hand resting on the uterus feels a more powerful contraction, with which some blood escapes from the genitals and the uterus becomes materially smaller under the hand, it is clasped with the fingers of one or both hands spread out on it; and, kept in the middle of the true pelvis with the fundus directed forwards and upwards, it is pressed *gently* towards the hollow of the sacrum or rather towards the coccyx, *i.e.*, with the patient lying horizontally on her back, vertically downwards (*v.* Fig. 3), in the true pelvis. This pressure must be made only during the acme of a pain. . . .

"In rare and very favourable cases, and under a practised hand, the placenta glides already with one of the first contractions out of the uterus into the vagina, even out of the vulva. But, as a rule, this happens with the third or fourth contraction, and these coincide with five minutes or more after the delivery of the child. Has the third or fourth contraction, however, not yet had the desired effect, *I wait patiently* for further contractions, and with care turn every one to account in the manner described."

We have quoted this in full, because it is sometimes supposed that Credé's method is a forcible interference with the natural method. Instead of being so, it is an imitation of the natural mechanism as far as the delivery of the placenta is concerned.

But the gradual nature of the separation of the membranes makes us demur from the statement that, "as a rule," the placenta should be expelled in five minutes or more. A quarter of an hour should elapse before we have recourse to his method; we have found that the membranes were liable to remain attached in part, when his method was had recourse to immediately after the child was born.

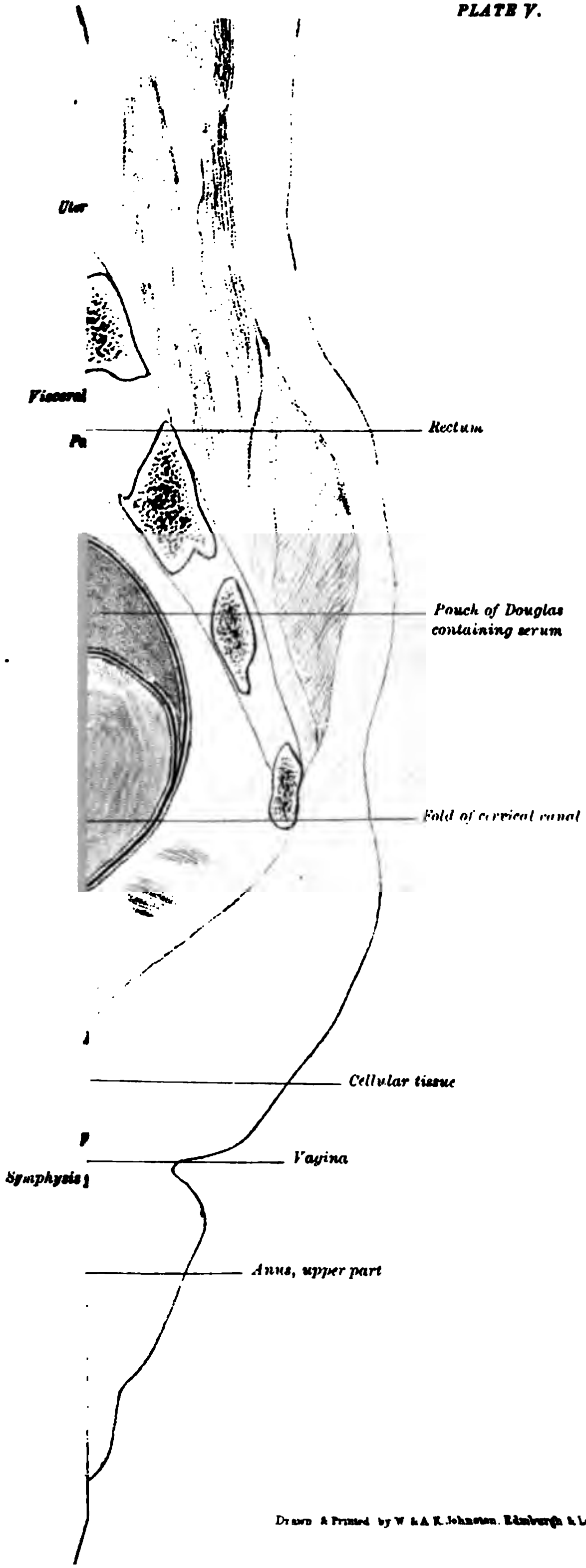
in a graduation thesis.[1] Plate IV. is taken from a p vertical mesial section, and shows the relations of the uterus.

Description of Plate IV.—The *pelvis* is kyphotic. T between the upper border of the symphysis and the u the first sacral vertebra is $6\frac{5}{8}$ in. (17 cm.)

The *Post-partum Uterus* fills the pelvic cavity. Th a pyramidal shape, measuring $3\frac{7}{8}$ in. (9·9 cm.) verticall (9·5 cm.) antero-posteriorly across its base. The cervi compressed vertically, flattened out antero-posteriorl versely; it measures $1\frac{1}{8}$ in. (3 cm.) vertically, and $2\frac{1}{4}$ to 2 7 cm.) antero-posteriorly; its posterior wall is folded i vical canal is bulged outwards in its middle portio bulging portion has been cut into, although the os in externum lie to the right of the plane of section. T surface of the body of the uterus is in relation to the covered surface of the bladder for $\frac{3}{8}$ in. (1 cm.), the dominal wall for $1\frac{1}{8}$ in. (3 cm.), and the intestines for 3 The posterior surface has intestine in relation to it fo cm.); below this the pouch of Douglas extends for $4\frac{1}{4}$ i The uterine walls measure in thickness 1 to $1\frac{1}{8}$ in. (2·5 anterior $1\frac{1}{16}$ to $1\frac{3}{16}$ in. (2·7 to 3 cm.) The placental si seen on the anterior wall, which also shows sections of l sinuses all through its substance. The uterine cavity i in shape and measures $2\frac{1}{2}$ in. (6·4 cm.) vertically, and $2\frac{1}{4}$ antero-posteriorly; it contains blood-clot. The cervic not been cut into except in its folded middle portion.

The *Vaginal* canal measures $4\frac{1}{16}$ in. (10·5 cm.) in le walls are slightly folded, especially the anterior, and

PLATE V.



Drawn & Printed by W & A K Johnston, Edinburgh & London

PREP. IV.—*Frozen Section of Pelvis from a Case that died from Post-partum Hæmorrhage 1½ hours after Delivery.*

The patient from whom this preparation was obtained had a normal first and second stage. There was a good deal of hæmorrhage in the third stage; the placenta was adherent, and had to be detached with the hand. She died an hour and a half after its removal. A complete series of frozen sections of the thorax, abdomen, and pelvis were made, which have been described in detail in a graduation thesis.[1] Plate IV. is taken from a portion of the vertical mesial section, and shows the relations of the post-partum uterus.

Description of Plate IV.—The *pelvis* is kyphotic. The distance between the upper border of the symphysis and the upper edge of the first sacral vertebra is 6⅝ in. (17 cm.)

The *Post-partum Uterus* fills the pelvic cavity. The body is of a pyramidal shape, measuring 3⅞ in. (9·9 cm.) vertically, and 3¾ in. (9·5 cm.) antero-posteriorly across its base. The cervix has been compressed vertically, flattened out antero-posteriorly and transversely; it measures 1⅛ in. (3 cm.) vertically, and 2¼ to 2¾ in. (5·7 to 7 cm.) antero-posteriorly; its posterior wall is folded in. The cervical canal is bulged outwards in its middle portion; and this bulging portion has been cut into, although the os internum and externum lie to the right of the plane of section. The anterior surface of the body of the uterus is in relation to the peritoneum-covered surface of the bladder for ⅜ in. (1 cm.), the anterior abdominal wall for 1⅛ in. (3 cm.), and the intestines for 3⅛ in. (8 cm.) The posterior surface has intestine in relation to it for 1½ in. (3·8 cm.); below this the pouch of Douglas extends for 4¼ in. (10·8 cm.) The uterine walls measure in thickness 1 to 1⅛ in. (2·5 to 2·8 cm.), anterior 1 1/16 to 1 3/16 in. (2·7 to 3 cm.) The placental site is clearly seen on the anterior wall, which also shows sections of large venous sinuses all through its substance. The uterine cavity is triangular in shape and measures 2½ in. (6·4 cm.) vertically, and 2¼ in. (5·8 cm.) antero-posteriorly; it contains blood-clot. The cervical canal has not been cut into except in its folded middle portion.

The *Vaginal* canal measures 4 1/16 in. (10·5 cm.) in length. The walls are slightly folded, especially the anterior, and are in close apposition.

The *Bladder* contains a little urine. It is triangular in shape, with the apex forwards and the base in line with the urethra. The superior and posterior walls are thicker than that behind the pubis. The urethra is 1 1/16 in. (2·8 cm.) long, and its walls are thickened. The *Peritoneum* is not thrown into folds over the uterus, but is markedly folded over the bladder and the anterior abdominal wall. The utero-vesical pouch has its peritoneal folds in apposi-

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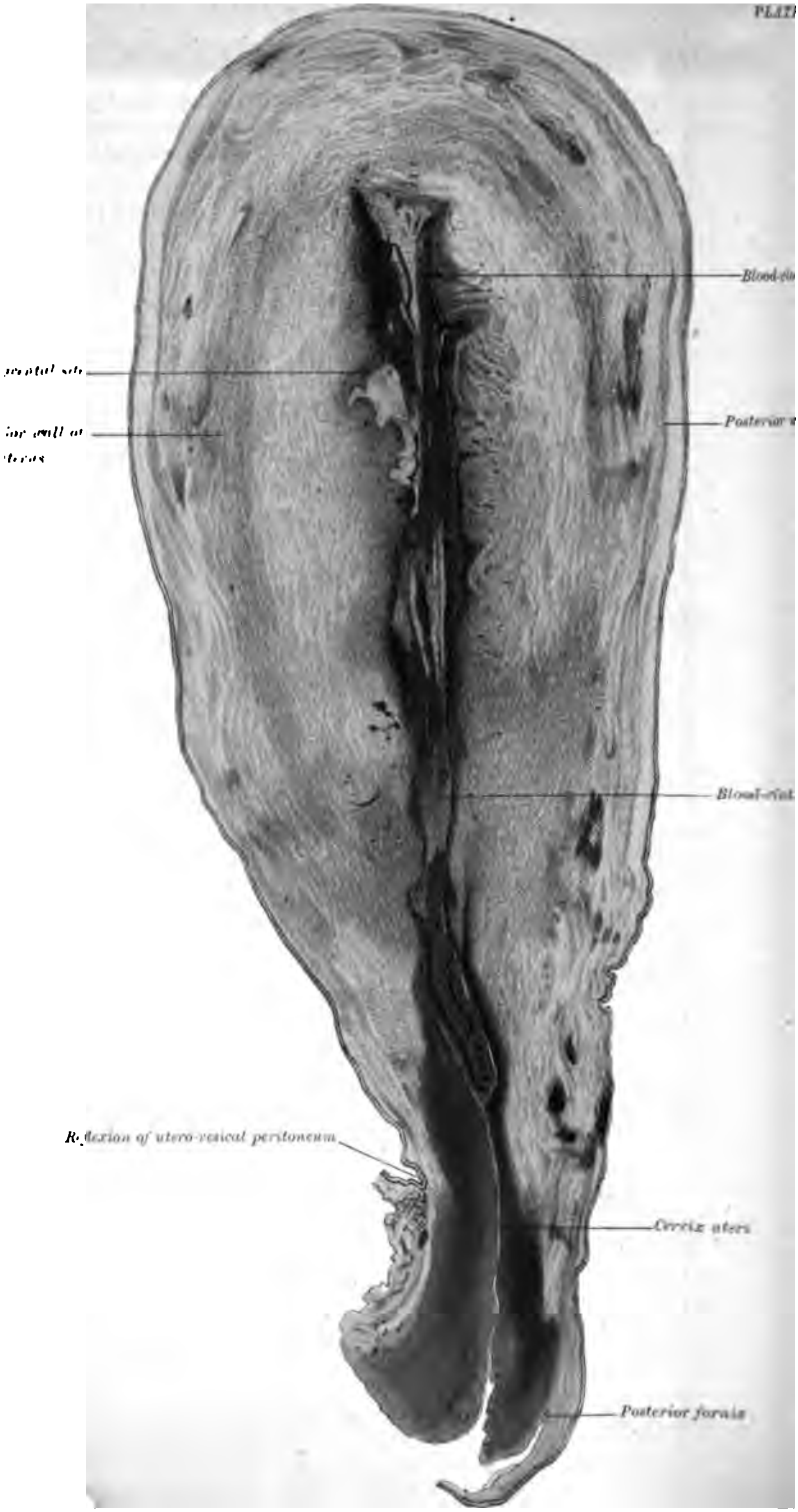
[1] *Spinal Deformity in Relation to Obstetrics.* By A. H. Freeland Barbour, M.D., F.R.C.P.E. W. & A. K. Johnston, Edinburgh and London, 1884.



ERTICAL MESIAL SECTION OF UTERUS FORTY HOURS AFTER DELIVE ughout. The pouch of Douglas extends to the level of the ygeal vertebra, and contains some serum in its upper part. *lar tissue* between the uterus and bladder is increased in The retro-pubic cellular tissue is flattened out over the ıd contains a large vein. The cellular tissue between the nd posterior vaginal wall is also apparently increased in

sections described in the thesis referred to show the rela- :he Fallopian tubes, ovary, and cellular tissue at the sides terus. The facts brought out in these sections may be ımed up.

:lation of the Pelvic Organs Post-partum.—The uterus fills a. The intestines descend only into the upper two-thirds ero-vesical pouch, and not at all into the pouch of Douglas, ugh the peritoneal folds are separated by serum. The ie about the level of the brim. The bladder lies behind s. The uterine walls measure 1 to 1⅛ in. (2·5 to 3 cm.) at on which the placenta is situated is about ¼ in. (·7 cm.) nd much more vascular through its whole thickness. The the uterus was, in this case, of a pyramidal shape, and l 3⅞ in. (10 cm.) vertically, and 3¾ in. (9·5 cm.) across its 'he lower segment of it and the cervix are flabby and lie below the firmer fundus. The vaginal canal measures 4⅛ cm.) as compared with the normal length of 2⅜ in. (6 cm.) ılar tissue is increased, specially at the base of the broad s, and round the posterior fornix, but also between the ınd cervix. From the distribution of the cellular tissue, ent how readily a cellulitic abscess finds its way into the region, if it has formed round the ovary; and how, in s, it burrows through the sciatic notch. The peritoneum in this case thrown into folds over the uterus itself, as s Duncan has described it in some post-partum uteri; over der and adjacent part of anterior abdominal wall, it is y folded.

EP. V.—*Uterus from a Patient who died of Eclampsia 40 hours after Delivery.*

s patient, puerperal convulsions came on in a few hours ıormal labour. She died about 36 hours after the first nd the post-mortem was made 30 hours after death.

ıterus was lying with the fundus on a level with a line he iliac crests; it was firmly contracted. It was hardened, mounted in the same way as the Porro uteri.

AKED-EYE SECTIONS.—Plate VI. represents one of these. *us* measures 7½ in. (19 cm.) vertically, of which the body out 6 in. (15·2 cm.), and the cervix the remaining 1½ in.) Its broadest antero-posterior diameter is 2⅞ in. (7·4 which the anterior wall forms 1½ in. (3·9 cm.), the blood-clot in the uterine cavity ⅛ in. (·3 cm.), and the posterior wall 1¼ in. (3·2 cm.)

The *uterine cavity* is 6½ in. (16·5 cm.) long, the wall being 1 in. (2·5 cm.) thick at the fundus. The inner surface of the posterior wall shows some inequalities in the form of regular flattened ridges separated by slight furrows, and has a distinct outline; the surface of the anterior wall is more ragged, and its outline is obscured by the blood-clot which passes into these irregularities. The *blood-clot*, as already said, extends into the irregularities of the placental site on the anterior wall and fundus, but has a defined border towards the posterior wall. It extends as far as the uterine cavity, but does not go down into the cervix. In some parts it is pale and almost decolorized, in others red. At its lowest end it is apparently breaking down.

(*b*.) MICROSCOPIC EXAMINATION.—The blood-clot which occupies the uterine cavity is seen to be continuous with thrombi in the veins of the placental site; in some parts the clot is breaking down as indicated by foci of pus cells. The *placental* site is composed of heights and hollows covered with this blood-clot; the boundary line between scrotinal tissue and blood-clot cannot be traced. The rest of the uterine wall has a layer of tissue superficial to the muscular wall, varying from ·02 to ·04 in. (·5–1 mm.) in thickness; this represents the spongy layer. On the surface, it is ragged and breaking down; in the deeper part, spaces like the glandular cavities are seen; but the epithelium is not preserved. In the *cervix*, the free surface of the mucous membrane has lost the rugæ and is bared of epithelium; the epithelium is present in sections of the glandular spaces below the surface. The superficial layers of tissue are broken up by hæmorrhages. In the *vaginal fornices* the squamous epithelium is present.

PREP. VI.—*Uterus from a Patient who died of Phthisis about two days after Delivery.*

The patient had a normal labour, and died from the complication in the lungs. The uterus was quite flaccid (uncontracted), and measured 8 in. (20·5 cm.) vertically, and about 4½ in. (11·5 cm.) transversely. It was cut open, while fresh, to see the appearance of the cavity; and as the colour has not been retained, we do not give a drawing of it.

(*a*.) NAKED-EYE DESCRIPTION.—The preparation consists of the uterus and vagina laid open along the anterior wall.

The uterine walls average ½ in. (1·3 cm.) in thickness. The area of the internal surface of the body and cervix, laid open, measures 7½ in. (19 cm.) from fundus to os externum; of this the body forms 5½ in. (14 cm.) and the cervix 2 in. (5 cm.) The internal surface of the body, representing an area of 5½ × 7 in. (14 × 17·8 cm.), is slightly ragged and of a reddish colour in its upper three-fourths, smooth and pale in its lower fourth. That of the asures 2 × 4 in. (5·1 × 10·2 cm.), and is of a purplish- r, and marked by furrows along its lower border. That *gina* is pale. The zone of the bluish ecchymosed cervix markedly with the paler vagina below and the uterine ove.

uterine cavity is a *blood-clot* which measures transversely 4 cm.), and vertically 5½ in. (14 cm.), stopping short at ernum. It is broad above and tapers to a point below, e shape of the contracted uterine cavity.

CROSCOPIC EXAMINATION.—This showed the mass in the be blood-clot, and not a piece of placenta coated with he epithelium is present in the vagina, but not on the e post-mortem changes inside the uterus and cervix ny definite observations on the condition of the mucous a.

RACTICAL DEDUCTIONS FROM PREPS. IV., V., VI.

iately after delivery, the pubic and sacral segments of *floor* come into apposition again, so that the vagina ap- cleft. Dr Hart, in an extremely interesting paper on f the Phenomena of Parturition in their Practical [1] has drawn attention specially to this, and shown how of air is prevented by this mechanism. In the same shows how the curve of the posterior vaginal wall favours ion of the placenta in the vagina after its expulsion uterus, which is best remedied by hooking back the t of the wall with the finger.

the third stage, and after it, the patient should be in , or at least in a semi-dorsal, posture; even when washing gina and uterus this position should be maintained to ccess of air.

gina appears about 4 inches (10·2 cm.) in length immedi- r delivery; it has therefore, after its considerable stretch- e fœtal head, returned almost to the length which it had our began—3½ inches (9 cm.) This appearance is partly shortening of the walls by compression, and a return to us condition; it also proves the elasticity of the walls.[2] eworthy also that the epithelium of the vagina is not ff like that of the cervix.

vix is at first lax, and lies folded beneath the uterus; ile it regains its tone. The canal, if we can trust to characters for defining the os internum, measures 2 cm.) 48 hours after delivery, as compared with 1½ inches

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ctions of Edin. Obstet. Society, vol. vi. p. 128.

t has drawn attention to this rugosity and elasticity as allowing of the walls without rupture, in "A Contribution to the Anatomy gy of Rupture of the Peritoneal Portion of the Vagina during *rans. of Edin. Obstet. Society*, vol. vi. p. 128.

(3·8 cm.) before labour. The mucous membrane is broken up by ecchymoses, and has lost its epithelium on the surface.

The *uterine cavity* contains blood-clot, which is probably a prolongation of the thrombi at the placental site.[1] The mode of production of the thrombi at the placental site was first described by Friedländer,[2] and his results are confirmed by Leopold.[3]

From the uteri removed by Porro's operation, we saw that the greater part of the spongy layer of the decidua remains in the uteri post-partum. Unfortunately the post-partum uteri, owing to post-mortem changes, do not allow us to form any conclusion as to the subsequent changes in this layer. Friedländer states that the remains of the cellular and part of the spongy layer become melted down and discharged in the lochia; and that from the epithelium of the exposed gland spaces, the new epithelial lining of the uterus is derived. Leopold's results confirm this last point, while he maintains that the gland spaces are immediately exposed by the separation of the membranes. As already mentioned, Priestley was the first to suggest the regeneration of the epithelium from that of gland spaces which he found in the post-partum uterus, although Friedländer first demonstrated it as a fact.

It is a point of great practical importance to note the presence of these coagula in immediate relation to the veins and lymphatics of the placental seat, and the denuded condition of the cervix; they explain the liability to septicæmia after delivery, and the rapid course which it sometimes takes. The treatment of puerperal fever demands that we have a more precise knowledge of the local pathological causes which produce it.

VII.—REPORT OF THE ROYAL MATERNITY AND SIMPSON MEMORIAL HOSPITAL FOR THE QUARTER ENDING 31ST OCTOBER 1883.

By FRANCIS NICOL HAULTAIN, M.B.

(*Read before the Edinburgh Obstetrical Society, 9th July* 1884.)

63 women were delivered in the Hospital. Of these 33 were primiparæ, 30 multiparæ. Average age of primiparæ was 22·6 (oldest 38, youngest 16); of multiparæ 25 (oldest 34, youngest 19). 62 children were born—32 males, 30 females. The primiparæ gave birth to 14 males, 18 females; the multiparæ gave birth to 18 males, 12 females. There was one abortion at 4th month. Duration of labour in primiparæ:—1st stage, 17 hours; 2nd stage,

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[1] Matthews Duncan has described the presence of these coagula, but does not say whether he considers the existence of a small coagulum as a physiological occurrence. "Intra-Uterine Puerperal Coagula," *Trans. of Edin. Obstet. Society*, vol v. part iii. p. 61.

[2] *Op. cit.*, s. 30.

[3] *Op. cit.*, s. 88.

hour 50 minutes; third stage, 11½ minutes: longest being—1st age, 39 hours; 2nd stage, 6 hours; 3rd stage, 20 minutes: ortest being—1st stage, 4½ hours; second stage, ½ hour; 3rd age, *nil*. Duration of labour in multiparæ:—1st stage, 9 hours minutes; 2nd stage, 1 hour 25 minutes; 3rd stage, 10 minutes: ngest being—24 hours, first stage; 2nd stage, 4 hours; 3rd stage, minutes: shortest being—1st stage, 1 hour; 2nd stage, ½ inute; 3rd stage, 1 minute. Average duration of all labours, 14 urs 46¼ minutes. Of the presentation and position, 56 were rtex, arranged thus:—L.O.A., 43 = 69·9 per cent.; R.O.P., = 11·1 per cent.; R.O.A. 5 = 7·9 per cent.; L.O.P., 0. There re 5 preternatural, as follows:—3 breech cases; L.S.A., 1, or per cent.; R.S.P., 2 = 3·1 per cent.; L.M.A., 1 = 1·6 per cent. ce 1. There was 1 left cephalo-iliac in a flat pelvis. In 1 case th happened before patient was examined.

nstrumental Labours.—Forceps were applied in 7 cases.

ow Forceps Cases.—Once for uterine inertia, once for rigid ineum, and once for rigid os and R.O.P. (all primiparæ); once, sistent face to pubes, once large head strongly ossified (all ltiparæ).

igh Forceps Cases.—Once for flat pelvis in primipara.

ortality.—Maternal, 0; fœtal, 9, still-born, of which 8 were rid, the other at 8th month; infantile, 1, died of malnutrition.

uerperium, of 55 women, in 50 women uncomplicated; in 2 nen slight but inconsiderable increase of pulse and temperature; 1 woman puerperal melancholia. There were two cases of ametritis. One patient from preceding quarter suffered from ouble phlegmasia alba dolens. Average duration of puerperium, days. Uterine deviation on dismissal in 55 cases—right, 33 es; left, seven cases; central, 15 cases.

Weight of children.—Primiparæ—female, 6 lbs. 6 oz.; heaviest bs. 6 oz.: male, 7 lbs. 11 oz.; heaviest, 8 lbs. 6 oz. Multiparæ emale, 7 lbs. 2 oz.; heaviest, 9 lbs. 12 oz: male, 7 lbs. 1 oz.; viest, 10 lbs. 2 oz. *N.B.*—The 10 lbs. 2 oz. fœtus was a proged gestation of one month.

Average length of cord.—Males, 22 in.; females, 23 in.: total rage length of cord, 22¾ in.: longest, 38 in.; shortest, 12 in.

The following cases call for special description:—

1st CASE.—Case of flat pelvis treated with axis-traction for-a.—Mrs B., aged 25, iii-para; first child premature at 6th nth, 2nd still-born. On being called to the case, the os was nd to have been fully dilated for two hours, the membranes tured, and the head movable at the brim (position left cephalo c), the conjugate at the brim being 3½ inches; the transverse o being somewhat lessened; belly very pendulous. Dr Milne rray's modification of Prof. Simpson's axis-traction forceps were plied to the head, and after some difficulty the head was pulled to the cavity of the pelvis, and then another pain sufficed for its delivery. After the birth of the body a severe hæmorrhage occurred, but Credé's method of expressing the placenta being employed, this ceased. Patient made an uninterrupted recovery, no tear of the cervix or perineum having occurred. The child was a female, of large size, and alive. Patient was a multipara.

2nd CASE, also a case of flat pelvis treated with axis-traction forceps.—Mrs F., aged 19, primipara, was admitted into the Hospital on the 23rd August about 4 A.M., having been in labour, according to her own statement, since 9 the previous morning. Upon examination, the head was found high up, and quite movable at the brim, the os being about the size of a florin; membranes bulging in a state of constant tension. Pains were strong and good. From the position of the head, some abnormality was thought to exist, and external measurements of the pelvis taken, viz.: — External conjugate, 7 in.; interspinous, 10 in.; intercristal, 11 in.; which result caused us to believe that we had a flat pelvis, not increased in the transverse diameter. The os dilating very slowly, and at 7 P.M. it being only the size of a crown-piece, it was deemed advisable to consult Dr Croom, who ordered artificial dilatation. This was accordingly done by the digital method, Barnes' bags being difficult of introduction, owing to the constant tensity of the membranes. By 9 P.M. os was fully dilated, and Dr Croom was then sent for. On his arrival, by internal examination, a *flat pelvis* was found, the head lying in the left cephalo iliac position, the true conjugate diameter measuring 3½ inches. Axis-traction forceps were applied with little or no difficulty, and with one good pull the head at once passed through the brim; in a few minutes the head was born, the shoulders having to be expressed. The placenta followed ten minutes after, no hæmorrhage or other complications arising. Puerperium was quite normal. On examination before leaving hospital the cervix was found to be slightly torn on left side only, vagina and perineum quite normal. The child weighed 7 lbs. 12 oz.; a male.

Extern Cases.—Those were 160, as follows: Vertex, 145; breech, 3; abortions, 6; twins, 5 (2 premature); brow, 1.

Instrumental Labours.—Those were 10, as follows:—

High Forceps, 3—1 accidental hæmorrhage, 1 flat pelvis, 1 justo-minor pelvis.

Low Forceps, 7—1 rigid perineum, 1 uterine inertia in delicate woman, 4 persistent R.O.P, 1 prolapse of soft parts from previous procidentia uteri.

Mortality.—Maternal, *nil;* fœtal 12 (of which 4 were putrid); one case of gravid retroversion at 2½ months, in which, owing to the manipulation in replacing, abortion was brought on.

PORT OF THE ROYAL MATERNITY AND SIMPSON
IAL HOSPITAL, FOR THE QUARTER ENDING 31ST JANUARY

DER RUSSELL SIMPSON, M.D., Professor of Midwifery and Diseases
and Children, and Clinical Medicine, University of Edinburgh.

ad before the Edinburgh Obstetrical Society, 16th July 1884.)

ort which I lay before the Society has been drawn
David Smart, M.B. and C.M., Buchanan scholar for
has acted as house-surgeon in the Maternity during
ar, along with Mr G. F. Alexander, M.B. and C.M.,
tt scholar for 1883.

EXTERN CASES.

mber of cases reported during the quarter was 106.
5 were multiparæ, and 21 primiparæ.
tions.—Vertex, 98; breech, 3; remainder unreported or

hildren.—Males, 48; females, 58.
y.—Only one maternal death was reported—from post-
emorrhage. The patient was attended by her next door
who, alarmed by a great escape of blood after the birth
d, sent for a student whose address had previously been
ı. This gentleman immediately sent to the Maternity
ouse surgeon, who on his arrival at the house found
n dead, the bed being soaked in blood. Examination
e uterus filled with clots, thin-walled, above umbilicus,
acenta still adherent.
fortality, 8; infantile, 3; all premature, died about half
ter birth.
ation of Labour.—Natural, 93; laborious, 3; preter-
; complex, 6. There were three cases of abortion all
d month.
us.—All forceps cases:—
w; for uterine inertia.
gh; head in transverse position; flat pelvis; complicated
ıpsus funis; cord was quite cold, lying out on bed, had
r hours.
gh; flat pelvis.
.—There were three cases of twins:—
nales, footling and vertex, second still-born.
le and female, breech and vertex, 8th month. Dr Keith
ved an ovarian tumour from this patient two years

les, both vertex, putrid, syphilitic.
er complicated cases were—prolapsus funis and hæmor-
-partum (2), one fatal.

INTERN CASES.

During the quarter (November 1883 to January 1884) the number of patients treated in the Hospital was 57. These were as follows:—i-paræ, 23; ii-paræ, 19; iii-paræ, 6; iv-paræ, 3; v-paræ, 2; vi-paræ, 2; vii-paræ, 1; and ix-paræ, 1. Of the total number 19 were married, of these 3 were primiparæ.

Age.—Primiparæ, average 21 years 9 months; oldest, 30; youngest, 14 years 8 months, her labour was easy, child small. Multiparæ, 28 years 1 month; oldest, 44; youngest, 19.

Average Duration of Labour. Note.—As after case 25 artificial expression of the placenta was only had resort to in special cases, two sets of data are given for the duration of the third stage and of the whole labour. In calculating these averages the only cases taken are those where the statements of the patient seemed reliable, or where the duration of the various stages had been accurately noted by the house surgeon or nurse in charge.

Primiparæ.—1st stage, 11½ h.; 2nd stage, 2 h.; 3rd stage, 11 m. and 1½ h. Whole labour, 14 h.; 15 h. 10 m.

Multiparæ.—1st stage, 8 h.; 2nd stage, 1 h. 26 m.; 3rd stage, 16 m. and 1 h. Whole labour, 10 h. 18 m., and 9 h. 8 m.

Presentations.—Primiparæ: vertex, 23. Multiparæ: vertex, 31; breech, 2.

Positions—Primiparæ, L.O.A., 15; R.O.A., 5; R.O.P., 2 (both rotated forwards); uncertain, 1.

Multiparæ.—L.O.A., 24; R.O.A., 2; R.O.P., 2 (persistent posterior), uncertain, 3; L.S.A., 2. Total—L.O.A., 39; R.O.A., 7; R.O.P., 4 (2 persistent); uncertain, 4; L.S.A., 2.

Sex of Children.—Primiparæ gave birth to 13 male and 10 female children; multiparæ to 24 males and 9 females. Full time male children weighed 7 lbs. 11 oz., and measured $18\frac{9}{10}$ in. on average. The full time females weighing 7 lbs. 10 oz., and measuring $18\frac{2}{3}$ in. in length. The heaviest child, a male, weighed 9 lbs. 12 oz.; the lightest, also a male, weighed 5 lbs. Average weight of the placenta was 1 lb. 6 oz., and the average length of the cord 26 in. The heaviest placenta weighed 2 lb. 2 oz., the lightest 12 oz. The longest cord measured 34 in.

Premature labour occurred in six cases, and one doubtful. Periods—three at 7th, three at 8th month.

Presentations.—Vertex, 6; breech, 1.

There was one case of abortion in a patient at the 4th month. She had borne three living children, no previous miscarriages.

Mortality.—(*a.*) Maternal, 3, from septicæmia, to be afterwards referred to. *Note.*—The case of Porro's operation died on the 7th day of her puerperium, in Dr Macdonald's quarter.

(*b.*) *Infantile.*—One premature, found dead in bed beside its mother the morning after its birth.

c.) *Fœtal.*—(1.) Child full time; heart heard feebly day before
ur, waters burst early in first stage; child delivered by forceps,
, flabby, anæmic.
2.) Child full time, breech case, heart heard at commencement
abour. Second stage lasted 4 hours, head freed after body
n in three minutes. No pulsation in cord, child blue and
hyxiated.
3.) Child scarcely full time, born with some oozing from
trils, no pulsation in cord. Child gave one or two gasps;
ficial respiration tried for an hour with no success. Fœtal
ace of placenta stained with meconium; placenta probably
y. Second stage lasted 20 minutes. Heart heard at com-
ncement of labour.
4.) Child full time, blue in face, skin shrivelled, contraction of
er limbs. Mother syphilitic from date of impregnation.
eromatous patches on walls of umbilical vessels and prob-
y all through placenta.
5.) Child full time; skin peeling off; some ascites. Evidently
d for some time.
lassification of Labours.—Natural, 45; laborious, 8; preter-
ural, 2; complex, 3 (this includes an instrumental and a pre-
natural case). Of the natural cases three might be considered
cipitate labours lasting 3, 2, and 3½ hours.
Laborious.—1 lingering; 7 instrumental.
Instrumental.—High forceps, 2; low, 5.
High Forceps.—(1.) Primipara, 25, L.O.A. Had been three days
labour; waters had been draining away for 4 hours; os hardly
ly dilated, rigid; passages hot and dry. Child still-born. (See
e 1 of septicæmia.)
(2.) iv-para, 32, L.O.A. Justo minor pelvis. (See case of
mature labour.)
Low Forceps.—(1.) iv-para, 32, L.O.A. Uterine inertia from
dramnios. Second stage lasted 3½ hours.
(2.) Primipara, 22, R.O.A. Patient taking epileptiform fits.
ond stage 3½ hours in duration.
(3.) Primipara, 25, L.O.A. Inertia uteri. Second stage 6½
rs.
(4.) Primipara, 25, L.O.A. Inertia uteri. Second stage 4½
rs.
5.) Primipara, 29, R.O.P. Rigid perineum and inertia uteri.
ond stage 2 hours 40 minutes. Rotation incomplete.
he perineum tore to a greater or less degree in 17 cases. In
case the tear was central, in two up to the sphincter ani, and
ne through the sphincter into the rectum. In this latter case
patient was syphilitic (i-para) and perineum abnormally rigid.
st of the other cases were very slight lacerations, and occurred
primiparæ. All with one or two exceptions were at once
hed and dusted with iodoform.

Complex Cases.—(1.) *Fits.*—Primipara, 22, R.O.A. Admitted 14th November, stated to have been in labour three days. Patient, a curious hysterical girl, was noticed by the nurse to have an epileptic-like fit on the night of her admission. The following forenoon, during the second stage of labour, she had an intensely violent epileptiform attack lasting for a few minutes. Forceps were at once applied and the labour completed. There was no albumen in the urine, nor any previous history of fits. During her fourteen days after residence no other fits were observed. Her recovery was delayed by inability to use her lower limbs, probably hysterical in character.

(2.) *Hæmorrhage.*—ix-para; breech L.S.A., 44. Patient on admission had a copious hæmorrhagic discharge from her vagina, increased by each pain. She stated herself to be about eight months pregnant. About a week previous to her admission she had a hæmorrhagic attack while in bed. She remained in bed and the hæmorrhage stopped. Examination showed os dilated about size of half-a-crown, presenting part small, high up; placenta not felt on careful exploration. As it was judged to be a case of low implantation of the placenta the membranes were ruptured, the waters escaped, and the hæmorrhage ceased. The child presenting by the breech was born alive 25 minutes afterwards. Examination of the placenta showed opening in membrane quite close to the placental edge.

(3.) *Tumour of Cervix, Porro's Operation.*— ii-para, L.O.A. Age ? (Afterwards referred to.)

Puerperium.—In 39 cases the temperature never rose as far as 100°, 6 not as far as 100°, 1 did not reach 102°, 4 never beyond 103°, 5 never beyond 104°, and 2 only reached 105°. The curious point regarding the temperature is that, with one exception, all the elevations of temperature remaining persistently over 101° took place in the lower lying-in ward prior to and including the three septicæmic cases. Out of 20 cases delivered and treated downstairs in the early part of the session 10 showed elevation of temperature, 1 being as high as 102°; 3, 103°; 4, 104°; and 2, 105°. The remaining 37 cases showed only 8 elevations of temperature, 6 of these being barely 101°, the other 2 being 103° and 104°, and not persisting.

Ophthalmia Neonatorum.—During the quarter Credé's prophylactic treatment with a 2 per cent. solution of nitrate of silver was pursued. In four cases ophthalmia manifested itself. In two of these the eyes had not been treated with the silver solution; the third case, a slight one, treated with too strong a solution; while the fourth, which showed itself when the child was a week old, was undoubtedly due to exposure to cold. The disease readily disappeared under the nitrate of silver treatment.

Antiseptics.—The antiseptic used during the quarter was a solution of corrosive sublimate, 1 in 1000. It was found to be a cheap and efficient substitute for carbolic acid.

Stage of Labour.—The expectant treatment of the third
ently advocated by Dohrn, Freund, Ahlfeld, and others, re-
fair trial in 30 cases. After the birth of the child the hand
t on the uterus for about ten minutes, until one was certain
n had firmly contracted, and a ligature was placed round
l just where it protruded from the vulva. The external
having been cleansed, the nurse was instructed to examine
vals, and report at once to the house surgeon if any
age was occurring, or if the knot on the cord had slipped
s from the vaginal aperture. In either case the placenta
nce removed, either by the patient coughing, or sometimes
and introduced into the vagina. Where we had hæmor-
ith the placenta still in utero it was at once expressed. In
re cases it was expelled externally by the uterine effort
Experience with this method of treatment as compared
dé's, shows that in ordinary practice, at least, a middle course
ment, such as is usually followed among us, is the most
geous, *i.e.*, wait for twenty minutes to half an hour to allow
enta to separate, and if not then separated, express it by
method.

ollowing are the statistics of the 30 cases where the
remained in situ till expelled by the uterine effort:—

Time.	Hæmorrhage.	Retained Membrane.	Fever—Puerperium.
min. and under	Oozing during next 12 hours at intervals		
" "	...	...	102° once. Due to eating fruit
" "	1 hour after		
hour "	...	2 cases. In 1 case part removed; no temperature rise	1 tubercular, probably
hours "			
" "	Oozing at intervals till 6 days after; suddenly on getting up on 8th day	...	104° for 3 days
hours and over			

.—In two of the cases recorded as 3 hours or over the
had certainly been in the vagina at least half an hour
s removal. In another case placenta had to be expressed
é's method at the end of 5 hours.

ree cases, not recorded in above table, the placenta was
d 5, 10, and 48 minutes after birth of child on account of
morrhage.

The following three cases of septicæmia and one of premature labour require special note. The case of Porro's operation has been already reported:—

1. *Case of Puerperal Septicæmia.*

J. F., primipara, single, aged 25. Admitted 22nd Nov., delivered 24th Nov.

Menstrual history normal. Condition during pregnancy good. No complications of pregnancy.

Physical Examination revealed nothing abnormal. Patient quite healthy, but excited. Child, head presenting in left anterior position probably. Heart distinctly audible between umbilicus and left anterior iliac superior spine.

Labour began on 24th November. For three days previously patient had suffered at intervals from slight pains, probably false. At 10 A.M. patient melancholy, pains feeble at short intervals. The first stage progressed normally, but slowly, until 7.30 P.M., when the waters burst, the os being then about size of a crown or a little more. The patient, who in the morning had been melancholy and quiet, began now to be very excited, shrieking out at intervals, and very unmanageable. At 10 P.M. examination showed vagina hot and tender, cervix about 3 in. × 3 in., rigidly contracted and thinned out round head of child. Patient was at once put under chloroform; passages douched with hot sublimate solution, and digital dilatation of cervix tried, but as no advance had been made, pains still continuing at intervals, at 11.30 P.M. axis-traction forceps were applied. The head was delivered in about an hour, the shoulders tearing the perineum to the extent of one inch. The child was still-born, anæmic, and flabby, no fœtal heart or pulsation in cord felt. The placenta was expressed 15 minutes after the birth of the child. Perineal tear stitched with silkworm gut and dusted with iodoform. Examination showed a deep laceration of the cervix on the left side up almost to the vaginal junction.

Progress of Case.—Nov. 25th.—Patient feels quite well this morning. Temp., 98°·4; pulse, 96. Still excited and queer. Water drawn off at 10 A.M. This afternoon patient very excited; complained of pain in pelvis; eased by water being drawn off. Temp. 100°. Ordered quinine gr. x., and warm applications to abdomen. At 11 P.M. temp., 102°·8; pulse, 120; very compressible. Patient very restless, anxious-looking. Still some abdominal pain. Ordered salicylate of soda 20 gr., and sulph. morph. gr. ⅙. Water drawn off.

Nov. 26th.—1 A.M.—Temp., 98°·4; pulse, 130, compressible. Still abdominal pain. No tympanitis. 6 A.M.—Complains of cold in extremities. Brandy and warm bottles to feet ordered. Temp. 98°·4. Has been very excited; shrieking out and delirious. Has slept none. 8 A.M.—Much weaker; pulse imperceptible. Given ether hypodermically. Lochia foul smelling. 11 A.M.—Patient died.

2. *Case of Puerperal Septicæmia.*

1. C. C., vi-para, aged 35, has been a widow seven years; admitted on Oct. 13th, delivered Nov. 25th; treated in private ward.

2. *Menstrual History.*—Nothing abnormal. Condition during pregnancy good; no complications.

3. *Previous Obstetric History.*—Her first four children were normal labours; puerperia also normal. Her fifth child eight years ago was delivered by instruments still-born.

Physical examination revealed nothing abnormal, except child's head could be felt above umbilicus. Body in the left sacro-anterior position; fœtal heart distinctly audible on the evening of Nov. 24th.

Labour commenced on the morning of the 24th. First stage lasted 30 hours, pains at first very feeble; second stage, 4 hours; and the third, 10 minutes. On the body being born, as no pulsation was felt in the cord, traction was made, the arms freed, and the head extracted in about three minutes. The child, a fine male, was in an asphyxiated condition, and could not be resuscitated. There was some hæmorrhagic oozing at intervals for three or four hours after the birth of the placenta.

Progress of Case.—*Nov.* 26*th.*—Temp. normal.

27*th.*—Morning temperature normal. Removed to private ward beside case 3. Rigor. Evening temp., 102°·4; pulse, 128. Flatulence. Ordered turpentine, Warburg's tincture, and tinct. ferr. mur.

28*th.*—Temp. 102° this morning. Uterus to be douched out thrice daily; some headache and thirst; flatus gone. Evening temperature, 103°·6.

29*th.*—Bowels moved. Patient says she feels better, but looks weaker. Temp. at 11 A.M., 101°·8; pulse, 114. Ordered digitalis, 10 minims thrice daily, and whisky. 5 P.M.—Temp. 104°·4. Features pinched and pale. Purplish spots over lower limbs. Ordered ice-bag to abdomen. Patient quite conscious; articulates very imperfectly and slowly. Pulse 144, very weak and intermittent. 7 P.M.—Patient sinking; lethargic, but conscious.

Nov. 30*th.*—Temp. 99°·8. Patient almost unconscious. Face dusky hue; pulse imperceptible; sinking fast. Patient died at 2 P.M.

3. *Case of Puerperal Septicæmia.*

J. C., 20, primipara, single, admitted Nov. 26th, delivered 10 P.M. same day; treated in private ward.

Menstrual History. — Condition during pregnancy and labour call for no special remark. There was a slight perineal tear and some oozing after the birth of the placenta.

Progress of Case.—*Nov.* 27*th.*—Temp. normal in the morning, rising gradually in the afternoon, till at 6 P.M. it reached 105°; at

6 P.M. pulse 120. Ordered quinine and sulpho-carbolate of soda every two hours.

Nov. 28th.—Temp. taken every hour; still keeping up; 101° at 10 A.M.; pulse, 120. 102° at 10 P.M.; some diarrhœa. Ordered catechu and opium. Some symptoms of quinism. Quinine stopped; 10 drops tinct. ferri mur. every two hours. Uterus to be washed out thrice daily. Some abdominal tenderness; abdomen to be painted with iodine.

29th. — Bowels twice. Temp. 101° in morning. Warburg's tincture given. At 8 P.M. temp. 98°·4. Patient states she feels quite well.

Note.—On Nov. 27th a private patient, delivered on the 25th (see last case), was removed into this private ward. Her temperature having risen, and still keeping up, on the 29th, case 3, whose temperature was now normal, was at once shifted to the lower lying-in room, which had previously been thoroughly disinfected.

Nov. 30th. — Patient has had a rigor. Temp., 103°·2; pulse, 114 this morning. Pain in right side on breathing. Ordered hot fomentation to side, and chlorodyne 20 minims; also ℥ss. Warburg's tincture. At 9 A.M. pain and uneasiness gone. Temp. 102°; some flatulence. Ordered turpentine enema. 11 P.M.—Great distress in breathing; pleuritic friction on right side. Pulse, 120, high tension; temp., 102°·4. Mustard leaves to right side. Chlorodyne, 20 minims; drop doses tinct. aconit. every half hour.

Dec. 1st.—Temp. very high (102°-105°) all day. Cheeks flushed. Patient very restless; vomits everything; delirious; crying out. Hypodermic morph. at 1 P.M. Slept all afternoon. Nourished by nutrient enemata.

4th.—Patient died at 4 A.M., her difficulty in breathing having gradually got worse. Her features became pinched, her pulse imperceptible, and at last she succumbed.

Case of Induced Premature Labour.

1. C. M., iv-para, aged 32, married, admitted Jan. 3rd, 1884.

2. *Menstrual History.*—Began at 15; 28 day type; lasts three days. She last menstruated 18–21 May.

3. *Condition during Pregnancy.*—Very good.

4. *Complications.* — Slight nausea about second month; also lately at times.

5. *Previous Obstetric History.*—Five years ago she had her first child, a female; labour long; head perforated. Her second, a male, three and a half years ago, met a similar fate; and about two years ago her third, a full time female, was "basilyzed" by Professor Simpson in our Maternity Hospital (*Transactions*, vii. 44). All her recoveries were very rapid.

Physical Examination on January 5th.—(1.) Patient fair, cheerful woman, 61 in. high, apparently well made.

Examination of chest and spine reveal no marked deformity, pt, perhaps, undue arching of upper part of sternum, and some ession in lumbar region. The bones of the extremities are e, joints prominent, hands and feet short and stumpy, specially distal phalanges on both extremities.

.) *Mammæ* not much enlarged, slight areola, some watery etion.

.) *Abdomen.*—(*a.*) *Inspection.*—Umbilicus flush, pigmented, nigra indistinct; a few pink striæ round umbilicus; movets of child visible, fundus on right side. (*b.*) *Palpation.*—rus elastic; fœtus movable; walls of abdomen lax; head of s below; body to right; limbs above and to left. (*c.*) *Auscul-n.*—Souffle marked at left border of uterus. Heart heard below to right of umbilicus. (*d.*) *Mensuration*, 35 in. circumference evel of iliac crests; 15 in. ensiform to pubis; 13 in. fundus to is (measured with tape).

.) *External Pudenda.*—Perineum intact; P. V. vulvar aperture ll, pubic arch narrow, perineum rigid, vagina moist, warm, ewhat relaxed; cavity small, cervix normal in position, hangdown at vaginal roof, softened but not shortened, anterior lip kened and elongated, fissured on both sides up to fornix on t side, os patulous, admits two fingers with difficulty; presentpart, clear of pelvis, evidently the head, felt in anterior fornix pressing uterus down with hand on abdomen; sacral promonr difficult of access, probably owing to small vulvar aperture small pelvis; sacrum feels as if abnormally concave forwards.

elvic Measurements.—Intercristal, 9 in.; interspinal, 6¾ in.; ernal conjugate, 6¾ in.; diagonal conjugate, 3⅝; true conjue, 2¾ in. to 3 in.

an. 4th.—Pulse, 76; temp., 98°·2. Patient to be douched every hours with hot antiseptic douche. Vagina to be dilated with nes' bags.

an. 8*th.*—Enema this morning at 4 P.M. Professor Simpson sed a bougie between the membrane and uterus at its left erior aspect; fœtal heart audible.

an. 9th.—No pains; bougie again passed for about 6 in. and in; douching and Barnes' bags to be continued. 11.45 A.M.—e water escaped.

an. 10*th.*—No signs of labour; bougie passed about 6 inches her. At 3 P.M. some slight pains.

an. 11*th.*—At 1 P.M., as labour not yet set in, bougie removed; llest size Barnes' bag introduced into cervix; some few pains. 3 P.M. passages moist, relaxed; cervix soft, admits four fingers; d felt presenting L.O.A.; right hand felt over anterior part of t parietal bone; fœtal heart audible. 9 P.M.—Largest sized bag oduced. 11 P.M.—Bag driven out; pains strong at short rvals; os size of a wine glass.

an. 12*th.*—4 A.M. Pains still severe; os almost fully dilated; erior lip thick, rigid, in front of head, hand as before. 9 A.M.—

Pains gone. 12.—Pains recurring; examination shows parts a at 4 A.M. Ordered chloral, 15 gr., 3 doses at intervals of half an hour. 3 P.M.—Examination shows anterior lip thick, hot, tense, in front o head; head feels during a pain as if tilting on sacrum; fœtal heart still audible. Maternal pulse 100 strong. 5 P.M.—As no progress was being made, Professor Simpson was sent for. After a careful examination under chloroform he decided it was a case for forceps. Accordingly, at 5.30 P.M., he ruptured the membrane, pushed the presenting hand out of the way, and applied the axis-traction forceps, an operation easily effected. The head having been pulled through the brim, the uterine efforts being strong and at short intervals, the forceps were removed, and nature allowed to complete the labour. At 6 P.M. child was born. It did not breathe or cry, but was speedily brought round by alternate immersion in hot and cold water, which had been kept ready in basins by the bedside. The placenta was expressed about 5 inches after the birth of the child. There was an extra amount of hæmorrhage post-partum, necessitating a couple of injections of ergot and manual compression of the uterus with both hands on the abdomen for about half an hour after the birth of the placenta. 8 P.M.—Patient sleeping. 11 P.M.—Patient quite comfortable, has slept for three hours.

Examination of Child.—Right hand and arm blue and puffy. Head—a curious dent on left frontal bone, roughly triangular in shape, its apex corresponding to the junction of the frontal and coronal sutures; the internal border, about 1½ in. long, being formed by the frontal suture, while the base extended for 1 inch or so parallel to the coronal suture. Posterior to this the mark of the lower forceps blade was distinctly visible, while the marks of the upper blade could be seen on the right temple and cheek. Child small, male. Diameter of head (measured four days after labour) O.M., 4¾; O.F., 4¼; S.O.B., 3⅛; Bi. P., 3⅜; Bi. T., 2⅜ inches. Circumference, 12¼, 12⅛, 11½ inches.

Progress of Case calls for no special remark. Her temperature never rose above 99°, and on the fourth day the services of the wet nurse (a patient) were dispensed with, the child vigorous, sucking eagerly, the mother having a fair supply of milk. A curious erythema, which disfigured her face during her previous puerperia never made its appearance. A small hæmatoma formed on the child's head in front of the frontal depression, but had almost disappeared before the dismissal of the patient. Her condition on dismissal (Jan. 30th) was as follows:—General, very good. Breasts—Copious secretion. Uterus — A finger-breadth above pubis; position, anteverted, os fissured and patulous. Vagina, pudenda, and pelvic tissues, nothing abnormal. Child—Condition good, dent on skull still marked. Mode of nutrition—maternal. Umbilicus cicatrized.

Part Second.

REVIEWS.

Treatise on the Continued Fevers of Great Britain. By CHARLES MURCHISON, M.D., LL.D., F.R.S., Fellow of the Royal College of Physicians; Physician and Lecturer on the Principles and Practice of Medicine, St Thomas's Hospital; Vice-President and Consulting Physician, London Fever Hospital. Third Edition. Edited by W. CAYLEY, M.D., F.R.C.P., Physician to the Middlesex Hospital and the London Fever Hospital; Lecturer on Medicine to the Middlesex Hospital School of Medicine. London: Longmans, Green, & Co.: 1884.

THE classical treatise on the Continued Fevers by the late Dr Iurchison has been for more than twenty years the standard book f reference in this country, and on that account any new attempt estimate its value would be, to say the least of it, quite super- uous. We shall best perform the pleasing duty of criticising this eat work by instituting a comparison of the present with the last lition, in order to survey the advances made in the knowledge and eatment of fevers during the eleven years which have elapsed nce the second edition appeared. Before plunging, however, into n examination of any details, let us commend Dr Cayley for the dicious manner in which he has carried out the duty entrusted to im. He has deemed it prudent to make as few changes as ossible in the work, except where alterations have been absolutely ecessary in consequence of recent discoveries and new methods f treatment. In this we are of opinion he is right, as most eaders of the treatise will prefer to have it in the same form as that n which its author left it.

In this notice of the book we propose to look into two points here the greatest changes of opinion are to be found—the relation etween micro-organisms and disease, and the antipyretic treatment f the febrile state. With regard to the former, it is refreshing to ind that Dr Cayley's views on parasitic organisms are entirely free f the reckless and unscientific dogmatism which is so common in hese days. He is clearly of opinion, as we all are, that these rganisms probably cause fevers, but he is little inclined to base uch reasoning on *post hoc* arguments. We may put it briefly and learly if we say that without being reactionary he is cautious.

The editor, then, believes that parasitic organisms are probably he cause of fever, and he is inclined to admit that these diseases ay arise *de novo*, not by the spontaneous origin of such organisms, ut because they have been latent, and only become virulent in the resence of unhealthy surroundings, such as pent-up sewage or im- erfect ventilation. He thinks that typhus fever is probably caused by a specific microbe requiring overcrowding and bad ventilation to develop its virulent and contagious tendencies. The definition of relapsing fever has been slightly modified in consequence of the discovery of the spirochæte or spirillum by Obermeier in 1873; this organism is afterwards fully described, and several illustrations of it after Heydenreich are given. The cause of typhoid fever is, according to Dr Cayley, "a specific poison consisting of a contagium vivum, possibly a bacillus, though this cannot be considered as proved." He adds that "some facts would indicate that the contagion may be developed under certain conditions out of other organisms present in decomposing matters, which, until they have undergone this modification or transformation, are innocuous, or at any rate incapable of communicating the disease. What these conditions are is still very imperfectly known: stagnation in closed receptacles seems to play an important part, and it is not improbable that transmission through the human organism is a potent factor." Referring to the discovery of bacilli in the mesenteric glands, spleen, and other organs, in cases of typhoid fever, he allows that the discovery gives some support to the view that they constitute the specific poison, but adds that the subject requires further investigation. An excellent description of these bacilli from the pen of Dr Heneage Gibbes is appended to these remarks, and it is illustrated by drawings of the organisms.

Turning to the subject of treatment, we find that Dr Cayley has made some important additions, mainly as regards the means of reducing the temperature; and in these additions he is as judicious as in his remarks on the matters with which we have first been occupied. Entering upon the subject of the cold bath in typhoid fever, he discusses the views of the modern German authorities. In his remarks he refutes some of the objections to cold bathing, and gives it as his opinion that collapse is very unlikely to occur if the treatment has been carried out with care, no such accident having been seen by himself; that the frequency of hæmorrhage is not increased; and that pulmonary congestion and inflammation are prevented by the bath instead of being precipitated by its use. He finds also that patients have rarely any repugnance to the bath; rather do they, in most cases, find it grateful in itself or in its effects. And, lastly, the mechanical difficulty of carrying out the cold bath treatment may at least in hospital be entirely removed by the use of such an apparatus as that designed by Mr Fardon, which is figured in the book, and which is now in use in the Middlesex Hospital and the London Fever Hospital. He mentions all the other methods of lowering the temperature by external means, but gives the palm to the cold bath.

As to the treatment of typhus fever by the cold bath, he states that his own experience has been too limited to allow him to draw any positive conclusions as to its effects on the rate of mortality. He has, however, found it far more efficacious in relieving many urgent symptoms than any other means of treatment. He has altogether treated ten cases, two of which died; both of these, however, were in a hopeless condition before the treatment was begun. He narrates a case in which a bath at the temperature of 70° F., of 15 minutes' duration, was given whenever the axillary temperature exceeded 102° F.

With reference to antipyretic drugs, he regards quinine, salicin, salicylic acid, salicylate of soda, kairin, and digitalis as the most important, and enters fully into the use of kairin, which he would not now give if the heart were threatening to fail, or if there were any pulmonary complications.

We are inclined to think that even Professor Gairdner, who is so severe—and in our opinion deservedly so—on the extreme methods pursued by several German physicians, would admit that Dr Cayley's remarks are extremely temperate and scientific on the question of antipyretic treatment.

One other matter must be noted, and we have done. Dr Cayley refers to the occurrence of sudden death as one of the accidents liable to take place in the course of typhoid fever, and mentions the opinions held on the subject by Dieulafoy, Tambereau, Liberman, and Sohier. "The knowledge that this accident is liable to occur," he observes, "even after mild cases, should render caution necessary in allowing convalescent patients to exert themselves mentally or bodily."

In every way this edition of Dr Murchison's work is brought up to the present date. By the judicious manner in which Dr Cayley has performed his duties as editor, the charm of the book is at least as great as ever, and this edition will prove as useful and as engaging to the present generation as its predecessors have been to the past.

On Visceral Neuroses: being the Gulstonian Lectures on Neuralgia of the Stomach and Allied Disorders. By T. CLIFFORD ALLBUTT, M.A., M.D. Cantab., F.R.S., F.R.C.P., Consulting Physician, Leeds General Infirmary. London: J. & A. Churchill: 1884.

THESE lectures, combining as they do rare charm of style, singular happiness of language, and great vigour of thought, attracted universal attention when they appeared in the medical journals, and we are very glad to welcome their publication in this separate form, which has proved necessary from the demand for them by the profession in every quarter.

The denunciation of "specialism out-specialized," in the preface to the book, is certainly well-timed, for, as the author remarks, "the best men of the day are too lenient in this matter." And we heartily agree with him in what he says about "the flock of women who lie under the wand of the gynæcologist." It is, indeed, high "time we complete our reaction from this gynæcological tyranny." We may quote one or two of the author's severe but well-merited strictures about the unfortunate neuralgic woman. "However bitter and repeated may be her visceral neuralgias, she is either told she is hysterical or that it is all uterus. In the first place she is comparatively fortunate, for she is only slighted; in the second case she is entangled in the net of the gynæcologist, who finds her uterus, like her nose, is a little on one side, or again, like that organ, is running a little, or it is as flabby as her biceps, so that the unhappy viscus is impaled upon a stem, or perched upon a prop, or is painted with carbolic acid every week in the year, except during the long vacation, when the gynæcologist is grouse-shooting, or salmon-catching, or leading the fashion in the Upper Engadine. Her mind, thus fastened to a more or less nasty mystery, becomes nervously apprehensive and physically introspective, and the morbid chains are rivetted more strongly than ever. Arraign the uterus, and you fix in the woman the arrow of hypochondria, it may be, for life."

Another subject which Dr Clifford Allbutt throws into strong relief is the distinction between the neurotic and the hysterical patient. "The neurotic woman is sensitive, zealous, managing, self-forgetful, wearing herself for others; the hysteric, whether languid or impulsive, is purposeless, introspective, and selfish. In the one is defective endurance, but in the other defect of the higher gifts and dominion of mind." And yet, as he says, "we have types intermediate between the sleek religious woman who knits antimacassars and lives upon her friends, and the hollow-eyed, fiercely active, wan woman, who, labouring ever for others, tries to hide the wolf within her, even from herself."

The author's remarks on neuralgias of the various abdominal organs are of the highest value, but they must be read in full in order fully to appreciate their interest and use. We can in this place do no more than state our opinion that if any one has not yet read these delightful lectures, he has a great treat in store for him, for they are without doubt as refreshing to the weary brain of the medical man as a Highland breeze is to his jaded body.

The Filaria Sanguinis Hominis and certain New Forms of Parasitic Disease in India, China, and Warm Countries. By PATRICK MANSON, M.D., C.M., Amoy, China. London: H. K. Lewis: 1883.

THE greater portion of this work has been published before, partly in the *Pathological Society's Transactions* for 1881, and partly in the *China Customs Medical Reports*, from the comparative obscurity of which the author has done well to rescue those contributions to helminthology which he now presents to a European audience. The book is divided into nine chapters. The first six of these deal with the filaria sanguinis hominis and its connexion with what, following Dr Manson, we may now call the elephantoid group of diseases. In the remaining three the more recently discovered parasites, distoma Ringeri, ligula Mansoni, and a new form of tinea entitled T. imbricata, are described.

Chapter I. is a reprint of a paper published in the *Transactions of the Pathological Society*. In it the pathological significance of the filaria (which, in a later part of the book, he says is not yet properly understood) is considered in detail. In addition to a minute anatomical description of the worm and its embryo, we have the habitat of the animal in the distal lymphatics, the diurnal periodicity of its appearance in the general superficial circulation, and the development of the embryo in a distinct species of mosquito, carefully worked out. What happens to it after development in the body of the mosquito is as yet matter of conjecture. A hiatus in its life-history occurs; but Dr Manson not unreasonably supposes that it passes into the drinking water, and so readily enters the stomach of its host, from which, by a curious instinct similar to that which "guides the *trichina* to the muscles, the *liver-fluke* to the gall-ducts, the *giant strongyle* to the pelvis of the kidney, the *bilharzia hæmatobia* to the veins of the bladder, the *filaria immitis* to the right ventricle of the dog, the *filaria sanguinolenta* to his œsophagus, the *filaria corvi torquati* to the pulmonary artery of the crow, and the *filaria picæ mediæ* to the semilunar valves of the magpie," it finds its way, working against the stream, to one or other of the listal lymphatics, where it ultimately settles. Here it is followed by one of the opposite sex (which sex seeks the other our author loes not say), and as a result a numerous progeny soon appears. The embryo, when mature, is about $\frac{1}{3500}$ of an inch in diameter, and when discharged into the lymph-stream readily passes along the ymphatics through the thoracic duct into the bloodvessels, its preence being quite compatible with the perfect health of its host. t is not the mature, but the immature rounded ovum or embryo which leads to mischief in the form of chyluria, lymph-scrotum, nd elephantoid disease. If any cause makes the parent nematode o abort, the ovum is discharged in a unextended condition ($\frac{1}{300}$ in. × $\frac{1}{750}$ in.), with a diameter five times greater than that of the fully ormed, outstretched embryo. Obstruction, followed by stasis of ymph, and later on by elephantiasis and elephantoid disease, then ccurs, the elephantiasis being set up not by the presence of the vorm, but by the impaction of the lymphatics. The practical onclusion to which the author comes is, that while the disease does ot admit of cure, it might very readily be prevented by covering the ells and water-jars to keep out the mosquitos, or by boiling or ltering the drinking-water.

In the second chapter Dr Manson details various experiments made in reference to the peculiar phenomenon which he terms filarial periodicity. These experiments included two on dogs, whose blood showed considerable numbers of embryos of *filaria immitis.* In them the phenomenon was less marked than in man, the embryos being always present in the blood, though in much greater profusion in the evening and night than during the day. They were separately poisoned when the number of the filariæ in the blood was, so to speak, at a minimum. The blood from various organs was examined, and the filariæ found to preponderate in that taken from the lungs. The author therefore concludes that they retire to minute branches of the pulmonary artery at the time of remission (*i.e.*, during the day). A converse experiment, showing an examination of lung blood when the number in the general circulation was at its maximum, would, we think, have rendered this observation more valuable. Arguing by analogy, Dr Manson concludes that during the period of intermission in man the filariæ retire to the blood of one or more of the deeper viscera.

His views await confirmation by post-mortem examination or other form of investigation; but it is not unlikely that they will be found to be correct. The object of this periodicity is evidently, as Dr Manson points out, to ensure that the further development of the filaria in the body of the mosquito is obtained. The nocturnal habits of the nematode embryo are adapted to the nocturnal habits of the mosquito, its intermediary host. The cause of the periodicity is still very obscure; but investigation has been somewhat helped by the observation of Dr Stephen Mackenzie, confirmed by that of Dr Manson, that inversion of the habits of the patient led to a similar inversion of the habits of the parasite.

The destiny of those embryos which are not removed from the blood by means of the mosquito is discussed in Chapter III., and the conclusion is come to that they rarely die, but continue to live in that fluid.

The fourth chapter is statistical. It shows that in Amoy, on an average, one in every eight persons is affected with filaria, and that the liability to it seems to increase with age. Tables of associated morbid conditions indicate that elephantiasis and allied diseases are those most commonly associated with the parasite.

The following chapters (V. and VI.) are chiefly clinical. A number of cases are adduced in evidence of the parasitic nature of elephantoid disease, and in favour of the theory that the elephantoid diseases are caused by embolism of the lymphatics by the ova of the filaria. In one of these cases the mature or parent worm was found in a dilated lymphatic of the scrotum; in another, fragments of the mature worm were observed in the contents of an abscess in the thigh; while in several the ova were found in lymph from the distal side of the glands.

Chapter VII. is devoted to a description of the distoma Ringeri and the so-called endemic hæmoptysis which results from its resence in the lungs of its host. It has been chiefly observed in ormosa and Japan. Dr Manson had an opportunity of studying in a few cases from Formosa. He is of opinion that, like the *filaria nguinis hominis*, it enters the human frame through the drinking f impure water. Its exact habitat in the lung has not yet been iscovered; but, proceeding on the assumption that it was in the ronchi, Dr Manson made several attempts in two cases to kill or islodge it. The patients were made to inhale sprays of various ermifuges with considerable benefit, and in one instance the sufferer as apparently cured.

The ligula Mansoni forms the subject of Chapter VIII. It was ound in the body of a Chinaman, who died of dysentery some ime after an operation for elephantiasis scroti. Its pathological ignificance is as yet unknown.

In the last chapter (IX.) Dr Manson gives details of a case of inea imbricata—a hitherto undescribed form of body ringworm—nd contrasts it with tinea circinata.

The whole volume bears on it the imprint of good, careful workmanship, of patient observation and research. It is a distinct addi-ion to our knowledge of helminthology. Much, no doubt, still emains to be done; but Dr Manson has had to work against erious obstacles, and he may well be congratulated on what he as already achieved. The value of the work is greatly enhanced y several very fine illustrations.

Vorlesungen über Pharmakologie für Aertze und Studirende. Von Prof. Dr C. Binz. Berlin, 1884.

This constitutes the first of the three volumes in which Prof. inz intends to let us have a summary of the lectures he delivers to e students at the University of Bonn. In the introductory apter he mentions that Dioscorides was the first to use the rase, ΠΕΡΙ ΥΛΗΣ ΙΑΤΡΙΚΗΣ, which his commentators rrectly translated by the term *materia medica*, and he then es on to show the relationship of pharmacology and pharmadynamics to medicine generally, pointing out that while armacology is in reality one of the oldest departments of pirical physic, it is one of the youngest of scientific medicine. is volume is entirely devoted to a consideration of the various urotics, of which the anæsthetics are the first group taken up. ncerning ether, note is made of the rediscovery of its use as an æsthetic in 1846, and instances are given where it had been em-oyed for this purpose many years previously. The actions of her in large and in small doses are given in detail, and its inflam-ability is specially insisted on, two cases of burning being cited, e of them fatal, where flexile collodion had been used on the wound of a Cæsarean operation. An able chapter on chloroform, wherein we have its mode of action and difference from ether well brought out, contains towards its close an account of the methods to be employed in determining the purity of the drug. Prof. Binz believes that many of the deaths from chloroform are due to the impurities contained in the special sample used, and he gives an analysis supporting that view. We are glad to note that he does not regard a small quantity of alcohol as detrimental; on the contrary, he thinks it makes the specimen more stable; and although he refers to ethyl alcohol, recent views go far to show that an admixture of methyl alcohol and chloroform, in the proportion of 1 to 5, obviates the tendency to vomiting which is occasionally seen on the employment of the pure anæsthetic. Opium and its alkaloids are next treated of. Morphia, the first separated, as it is one of the most important of vegetable alkaloids, naturally receives a good deal of notice: its actions on the different organs, its relation to the secretions, and the benefit and harm to be got from it in subcutaneous injection, are all detailed. The benefit of morphia hypodermically was brought specially to the notice of Dr Binz when in charge of a feldlazarette after the battle of Rezonville near Metz. It is to such cases as came before him there, viz., severe wounds and injuries, and on the other hand to incurable illnesses, such as cancer, that the author would be inclined to limit the use of the hypodermic injection of morphia. In regard to Cannabis indica we have a statement of the uses of the drug in the East, and an account of the symptoms experienced when it is smoked. The use of Cannabis indica as a hypnotic instead of opium is in certain cases advocated. Chloral and butyl chloral (otherwise croton chloral) are then brought under notice, and a chapter is devoted to poisoning by morphia and chloral, in which the resemblances and differences are pointed out. As treatment, in cases of poisoning by either of these, the author advocates the application of warmth externally, the use of artificial respiration, and the administration of nervine stimulants, *e.g.*, coffee, tea, and atropia. Morphia increases the inhibitory action of the vagus, which atropia diminishes, while chloral depresses the vaso-motor and respiratory centres, both of which are stimulated by strychnia. Levinstein has proved the usefulness of strychnia in poisoning by chloral in man, while Husemann and Kröger specially call attention to the improvement in the respiration after the administration of atropia. Of nerve sedatives bromide of potassium has a first place, and especially as a cure for epilepsy. The method of administration practised by Dr Bertelsmann is given in detail, and the evils attendant on a too-prolonged course of the drug referred to. The halogen elements, as Dr Binz points out later, seem to diminish the activity of the living protoplasm, and it may be to the action of these elements that the decided properties and narcotic effects of iodoform, chloroform, the bromine salts, nd nitrous oxide are due. Conium, its newly discovered homologe iperidin and curara, veratria, colchicum, the nitrites of amyl and oda, and nitro-glycerine, iodine, iodoform, the iodides, ozonized air, tropia, muscarin, hyoscyamus, and caffein, are each dealt with in letail, and many original views expressed, but to these space prevents our alluding. The book as a whole is excellently written, and contains at once no small amount of information regarding the history, chemistry, and physiology of each drug, as well as of its use in scientific therapeutic medicine.

An Introduction to Pathology and Morbid Anatomy. By T. HENRY GREEN, M.D. Lond. Sixth Edition. London: Henry Renshaw.

WE have once again to welcome a new edition of this admirable handbook, and upon this occasion to congratulate not only Dr Green, but also his colleague Mr Stanley Boyd, who has materially assisted in the performance of the work. When we look back at he first edition, published in 1871, and then at the present one, which is almost twice the size, containing over 550 pages, we feel hat criticism is not required, for, as is said in Scotland, "the proof of the pudding is the preeing of it," an adage which in the case of he volume before us is amply exemplified, when we remember that six editions have been called for within 13 years. The greatest addition to the present is perhaps the last chapter on Vegetable Parasites, in which there is an ample and clear explanation of this now most interesting and important subject.

The work is full of capital woodcuts, almost self explanatory, and our only fault with them is that they appear to be too highly enlarged for the magnifying power under which they are represented as being drawn. The style of the book is as of yore, and no doubt but this last edition will be as freely used as its predecessors have been by the student and practitioner.

A Handbook of Ophthalmic Science and Practice. By HENRY E. JULER, F.R.C.S. London: Smith, Elder, & Co.

THE larger English text-books of ophthalmology are either out of date or give undue importance to some one or more branches of the subject in which their authors are specially interested, whilst others, not less important, are cursorily, and often, indeed, carelessly discussed. The book before us, however, cannot fail to be a success. In it a sufficiently exhaustive, well written, and, as far as we can judge, generally accurate description is given of all the diseases of the eye likely to be met with. Each chapter is prefaced by a careful discussion of the anatomy and physiology of the region on which it treats, and this in a way which it will be difficult to improve upon in an ordinary text-book. Only the points necessary for a thorough understanding of the subject are introduced. Throughout the whole work, indeed, a careful selection has been made of these scientific facts, whether anatomical, physiological, or optical, which directly bear on the more practical points. The author also steers a good course between therapeutic enthusiasm and absolute scepticism on the value of drugs. His descriptions of the various operations, illustrated as they are by excellent woodcuts, leave little to be desired, and the numerous plates interspersed amongst the text, though not a few of them might in another edition be improved, cannot fail to make the book a most useful one for students of ophthalmology.

Post-Nasal Catarrh. By EDWARD WOAKES, M.D. Lond. London: H. K. Lewis: 1884.

DR WOAKES has seen fit to issue the third edition of his well-known work on "Deafness, Giddiness, and Noises in the Head" in two volumes, the first of which is that now under notice.

This work opens with some introductory observations on the correlating and reflex functions of the sympathetic system, more particularly of that division of it which presides over the nutrition of the nasal and post-nasal areas, to the perversion of which catarrh of the region is primarily due. Succeeding chapters are devoted to a consideration of the Etiology of Catarrh, Acute and Chronic Catarrh and its consequences, and to the management and treatment alike of the catarrh and the stenoses and hypertrophies which result from it, and become such potent factors in the production of deafness. Not the least interesting are the chapters devoted to Prophylaxis, in which much useful information is conveyed in regard to the "Mechanism of taking Cold," and the "Hygienic Management of the Catarrhally disposed." The part of the book devoted to the question of purely surgical treatment is illustrated by drawings of several simple but ingenious instruments, devised by the author for use in the nasal and posterior nasal spaces.

We have derived considerable pleasure from the perusal of this book. It is a good, honest piece of work, and merits the attention of every member of the profession.

A Plea for the Cure of Rupture; or, The Pathology of th Subcutaneous Operation by Injection for the Cure of Hernia. By JOSEPH H. WARREN, A.M., M.D. London: J. & A. Churchill 1884.

IF Heaton's operation for the cure of hernia is not ye thoroughly understood or appreciated by British surgeons, the ınnot be laid to the account of Dr Warren. Since the on of his first treatise on hernia in 1880, he has been t in bringing the merits of this operation before the n both in this country and in the United States. In the 'olume he deals more particularly with the pathology of by subcutaneous injection. He also goes more carefully preparation of the injecting fluid and the modus operandi ethod. Those who have not yet made acquaintance with ıtion will find in this volume a clear *résumé* of what has in the larger works. It is exceedingly well put out, and o the printer's art.

Lectures for the People. Illustrated. Fourth Series. red in Edinburgh during the winter of 1883–84. ırgh: Macniven & Wallace: 1884.

ommittee of the Health Society is to be felicitated on the e little volume they have issued. Every one of the is worthy of preservation in this permanent form. The ion, commencing with Mr Chiene's address on "A City ıce," has been one of marked success. It only remains for authority and those under authority to make the success ter by laying to heart the facts and lessons in the other reported in this little book.

'th of the Senses. By H. MACNAUGHTON JONES, M.D., etc. London: Longmans, Green, & Co.: 1884.

DABLE and interesting work on this subject is but what expected from Dr Macnaughton Jones. The volume he .uced is one which ought to become popular. Its title give an adequate idea of it, for in addition to advice on h of the special senses, we have some excellent chapters ice, on dress, on diet, and on education. There are here and ırks of hasty writing, and there are some who may be to doubt the wisdom of answering seriously the silly n the medical profession of one whom *Punch* does not to call a "prurient prude." There is not much more that nclined to find fault with, for we can heartily recommend e volume as a safe guide to those who desire to preserve something of the health of the delicate organs of special

The Alpine Winter Cure: with Notes on Davos Platz, Wiesen, St Moritz, and the Maloja. By A. TUCKER WISE, M.D., etc. London: Baillière, Tindall, & Cox: 1884.

THOSE who are familiar with Dr Wise's previous works on high altitude health resorts will have their interest centred chiefly on the last three chapters of this work, the others being little more than a reprint of what has already appeared, either in the volume on Davos or in that on Wiesen. The popularity of Davos has led to so much unpleasant overcrowding as to render it absolutely necessary to seek for fresh fields and "air-cures" new. As a consequence, Wiesen, St Moritz, Pontresina, and Andermatt have been recommended as places having all the advantages of Davos as a health resort. In addition to these we have now Maloja in the Upper Engadine recommended to invalids suffering from such affections as are likely to be benefited by a residence in high altitudes. The advantages of it according to Dr Wise are its protection from northerly, easterly, and southerly winds, the tempering of the Föhn wind as it blows over the Bernina glacier, the amount and duration of the sunlight, which from the configuration of the surrounding mountains is greater and longer than in the other resorts that have been mentioned, the presence of a mineral spring similar to that at St Moritz, and containing bicarbonate of iron, soda, and potass, and lastly, though not the least advantage, a Kursaal built on approved sanitary principles, with special appliances for ventilating and supplying both the public and private rooms with either moist or dry fresh air and volatilized remedial agents, if these are necessary or desired. Dr Wise recommends Maloja as both a summer and winter resort, and considers that the worst period of the year—the snow melting during April—can scarcely be termed dangerous, even to the most delicate, provided that ordinary precautions be taken. Advice is given as to the kinds of cases that may derive benefit, and those that are certain not to. There are hints as to diet and clothing, and tables of meteorological observations which, along with the other information given, renders this an authoritative and trustworthy work on the Alpine cure.

Plant Analysis: Qualitative and Quantitative. By G. DRAGENDORFF, Ph.D., Professor of Pharmacy in the University of Dorpat, Russia. Translated from the German by HENRY G. GREENISH, F.I.C. London: Baillière, Tindall, & Cox: 1884.

THIS is a good translation of an excellent work, and will supply a want long felt by chemists and pharmacists. It is impossible to over-estimate the importance of being able to obtain a correct analysis of the constituents of plants. Many of the most valuable drugs are obtained from the vegetabe kingdom, and it is of the utmost importance not only to know the principles upon which their virtues depend, but also to be able to obtain these in a separate form, for the treatment of disease. We commend the work very highly to all chemists and pharmacists.

The Cinchona Barks: Pharmacognostically Considered. By FRIEDRICH A. FLÜCKIGER, Ph.D., Professor in the University of Strasburg. Translated from the Original Text, with some Additional Notes, by FREDERICK B. POWER, Ph.D., Professor of Pharmacy and Materia Medica in the University of Wisconsin. London: J. & A. Churchill: 1884.

THIS is an excellent monograph on a most valuable group of medicinal plants. It contains chapters on the "Botanical Origin," the "Most Important Species," the "Habitat," and the "Culture" of the Cinchonas. The work also gives a good description of the collection of the barks, their appearance and anatomical structure, with the contents of their tissues and the location of the alkaloids. The author treats of the varieties of the cinchona barks and also of the so-called spurious cinchona barks. The work treats very fully of the chemical constituents of the barks and also of the quantitative estimation of the alkaloids. The work is beautifully illustrated. We have much pleasure in recommending this valuable monograph to all who take an interest in the cinchona barks or in the valuable alkaloids derived from them.

Part Third.

MEETINGS OF SOCIETIES.

OBSTETRICAL SOCIETY OF EDINBURGH.

SESSION XLV.—MEETING IX.

Wednesday, 9th July 1884.—Dr DAVID WILSON, *Vice-President, in the Chair.*

I. *Dr Ballantyne* showed SECTIONS of epithelioma of cervix and recurrent fibroid tumour.

II. *Dr Skene Keith* read a paper on SIX CASES ON TRACHELORRAPHY.

Dr Wilson said that the Society had much pleasure in listening to the paper. He was very glad to find that Dr Keith regarded the operation as one seldom demanded, as he had been inclined to think, from the frequency with which it was done in America, that either the condition was more common there than here, or else that the operation was performed more frequently than there was any need for.

Dr Berry Hart said he considered Dr Keith's an extremely interesting and judicious paper. He had not much experience in the operation personally, and in all the cases of split cervix which he had seen he had only seen one in which he advised an operation. His main difficulty was that he could not quite see the pathology of the condition, and had some difficulty in connecting the pain and other symptoms felt with the particular state of the cervix. He thought the cases for operation are those in which there is much eversion and granulation and leucorrhœa. He would like to ask Dr Keith what other lesions were present when he operated, and also under what conditions of associated disease he would regard operation precluded. In some cases which he had seen operated on he had found that the patient attributed a whole train of symptoms to the operation. There was a wide field for pathological observation in these cases.

Dr Milne Chapman said that he had done Emmet's operation four times, the indication for it in each case being tear of the cervix with ectropion of the lips and the presence of a large heavy uterus. In the first case union did not occur, but the uterus was slightly reduced in size; in two others, though union occurred, little benefit was derived from the operation. The fourth case was a success both immediately and remotely. He believed that the pathological history of these cases was somewhat as follows. On the occurrence of a tear at delivery a condition was produced in which we had the lower end of the cervical canal exposed and flanked on one or both sides by a raw surface uncovered by epithelium. A natural attempt at repair by first intention occurred, but in most cases was counteracted by the imperfect coaptation of the surfaces and the flowing over them of the lochial discharges. During the subsequent process of cicatrisation a degree of local hyperæmia was occasioned, and this interfered with the process of involution, and as a result the uterus remained large. The torn surface in course of time became covered over by epithelium of the same character as that of the cervix, as the cervical epithelium proliferated much more rapidly than did the squamous epithelium covering the vaginal aspect. This new surface came to resemble in all respects the cavity of the cervix, being thrown into folds and furrows, and covered with a single layer of cubical epithelium, through which the vessels readily shone, and hence the villous vascular appearance. The operation consisted in the removal of this newly developed cubical epithelium, along with the new cicatricial tissue, the stitching together of the rawed surfaces, and the consequent turning in of the exposed cervical canal. Dr Chapman, however, attributed much more importance to the enlargement of the uterus than to ice of the tear as productive of suffering in these cases r uterus accounted for the backache and other symptoms, increased cavity surface occasioned the menorrhagia and a, the latter condition being further aggravated by the from the surface of the exposed cervix and the frequently condition of cervical catarrh. The greatest benefit of tion appeared to be derived from the diminution in he uterus which so frequently resulted after its per- and he was greatly struck with the report of one of Dr ases where a reduction in size of 1½ inches occurred weeks. It was well known that a process of artificial ı frequently followed any operative interference on x, as, for instance, dilatation by means of tents, and erence involved in Emmet's operation seemed specially this process. He fully agreed with Drs Keith and t the operation should only be performed as a last n cases which had resisted all ordinary treatment.

bour's experience of these cases had been limited to the en cases which Professor Simpson had done. In not ı half of the cases operated on had any benefit followed. ht that Emmet's operation rested on a perfectly sound cal basis. If the condition is kept up by eversion of the anal, Emmet's operation is preferable to that of Schrœder. ner's recent paper shows that in a great many cases the med at by Emmet can be obtained by the judicious and ; use of hot water. By this mode of treatment the growth uamous epithelium of the vaginal portion is caused to upon the cylindrical epithelium of the canal, and restora- he normal condition is thus gradually brought about. es which persistently resisted this treatment were those he considered Emmet's operation was required.

nott had been greatly interested in the cases discussed. ht that Dr Keith did rightly in discriminating between es in which a woman was merely sent out of the hospital od cicatrix, and those in which permanent improvement lth followed the operation. He thought it well to make ion between the benefit derived from the operation as a d that which followed simply the depletion of the con- erus during the operation, and the rest in bed which the involved. He considered it would be a good plan to do operations as possible, and then having accumulated a amount of material to compare the results derived.

A. Young referred to the fact that not so very long ago it fashion to split cervices, and now the opposite practice . With reference to the efficacy of the operation, he d a case related by Dr Playfair of London at the Inter- Medical Congress. The patient had been under his care and treatment, suffering from split cervix for ten years, and at advised to go to New York. When there Dr Emmet operated, with the result that the whole of her bad symptoms entirely disappeared. He joined with the rest of the Fellows in expressing his sense of the judicious nature of Dr Keith's paper.

Dr Brewis said, that four out of the five cases of trachelorraphy done by Dr Macdonald during the past winter were successful, and the failure of the fifth could easily be accounted for. There was a deep tear on the left side of the cervix, accompanied by shrinking and contraction of the broad ligament of that side. This rendered the operation difficult, as it prevented the cervix being drawn down to the vulva. The stitches were introduced satisfactorily, and the patient had no bad symptom during the first week; it was found that when the stitches came to be removed the tear had opened up again, and the condition was as bad as it had been before the operation. He considered this result due mainly to the unequal traction brought about by the two broad ligaments. In one of Dr Macdonald's cases there had been considerable hæmorrhage on the third day. In one of the cases he had found the patient collapsed and faint from the loss of blood. He used hot water and Dr Sidey's styptic, and by these means checked the hæmorrhage. Some days after he found the whole vagina charred, and though he at first attributed this to the hot water, he found afterwards that this was due to the styptic. It is well in cases of trachelorraphy to instruct the nurse to watch for hæmorrhage, as otherwise a patient may lose a very large quantity of blood without any one being aware of it.

Dr Webster had a case five years ago which he wished to mention. She had a well-marked cervical tear, and had all the associated symptoms of backache, discharge, etc. He regarded it as being a bad case, and gave the patient a bad prognosis. He sent her to Dr Hart, and found sometime afterwards that the patient was quite well, and on inquiry he found that Dr Hart's treatment consisted solely in the use of hot water.

Dr Skene Keith thanked the Society for the way in which it had received his first paper there. When he returned from America he had had too sanguine ideas of the value of the operation, and was eager to perform it on all possible cases. Since then he had modified his views; and even by Emmet himself the operation was now one which was comparatively seldom performed. Those who employed it most frequently were chiefly the men further west. As to the pathology he could say little about it. Nearly all the cases varied widely in the local conditions; usually the uterus is considerably enlarged. He readily admitted that there were many cases in which rest in bed and hot water would effect a cure, and of course these are cases in which he would not operate. He would certainly not operate in any case where there was much cellulitis, unless in old standing cases which had resisted all other treatment, and in them he would operate with great care. He had not seen much hæmorrhage occur during the operation. In one in which Dr Lee was operating the cervix

y short, and a large arterial vessel was cut, but though the
hage was profuse for a little, it was easily secured.

)r Ballantyne read a paper on some CASES OF SPECIAL CLINICAL
THOLOGICAL INTEREST in the Buchanan Ward, under Pro-
Simpson, during the Winter Session 1883-84, with remarks
antiseptics employed, which will appear in a future
r of this Journal.

Vilson said the Society was much indebted for the interest-
count of the cases read, as well as for the important
tions on the antiseptic dressings employed.

kene Keith was much interested in the account given of the
gs used in the ward. In such a ward there was a good
nity of making observations on the absorbent power of the
gs. In one case at present under treatment where salicylic
employed for dressing, and which he finds answers fairly
mmon wool was used on one occasion, and he found that on
lowing day the discharge had escaped from the dressings,
over on the bed. He asked Dr Ballantyne whether in
e of epithelioma of the cervix there was any history of
arriage which might account for it. Dr Emmet was very
in his opinion of the rarity of the condition in women
ve neither miscarried nor born a child at term, and in his
nce has only seen two cases in which it occurred in multi-
He was also interested in the case of ligature of the artery
ovary; but he failed to see any special advantage to be
by not removing the ovary, as it was always quite possible
e sure against the risk of internal hæmorrhage by the
ment of a proper ligature. He was at a loss to account for
ire cessation of any red discharge from the vagina: usually
ouble ovariotomy there occurs on the third day after the
on a flow of blood from the vagina, which lasts for a longer
ter time; and he could not understand how it happened
case that this discharge was absent.

. *A. Young* had been making some observations on the
zing of iodoform for ordinary use, and he found that this
e done by mixing with it 1 to 50 of the active principle
Tonquin Bean (Coumarin).

arbour thought that Dr Ballantyne should be congratulated
y on the paper which he had read, but also on the excellent
opical sections he had brought before the Society. The
s of the recurrent fibroid were very interesting. It had
oted that the tumour grew more rapidly the second time
did the first, and it could be observed that the cell elements
oser and more numerous. It would be interesting to know
tumour was again returning. With regard to the epi-
a of the cervix, it seemed to be undoubtedly malignant,
the cell elements were more regular than usually
d in carcinoma, and possessed only one nucleus. The

observations on the dressings were of much interest, especially those on the wood wool, which had the great advantage of cheapness.

Dr Ballantyne thanked the Society for the way in which they had received his maiden effort. In reply to Dr Keith, he said that the patient who was the subject of the epithelioma of the cervix had only been married for five months, and there was no history of any menstrual cessation. The anterior lip was hard, but there was no cicatricial tear.

The Secretary read for Dr Millard, Dunbar, CASE OF PLACENTA PRÆVIA WITH FIBROID OF UTERUS, TURNING, PROBABLE RUPTURE OF THE UTERUS, PERITONITIS, AND DEATH, which will appear in a future number of this Journal.

Dr Leith Napier said that he had seen the case repeatedly with Dr Millard, and quite concurred in his views as to its nature. It was obviously one in which nothing could have been done which could have saved the patient's life.

MEETING X.

Wednesday, July 16th, 1884.—Dr ANGUS MACDONALD, Vice-President, *in the Chair.*

I. *Dr Macdonald* showed a MODIFICATION of the TARNIER AXIS-TRACTION FORCEPS. The specialty in the modification consisted in the fact that the rods were removable, so that the instrument could be used either with or without them. They were shorter than the rods of Professor Simpson's pattern, and for that reason less in the way during introduction of the blades, and entirely out of the way when locking. The Tarnier bolt had been retained for attaching the traction handle after application. He had found the instrument to act well in several recent cases of special difficulty.

II. *Dr Skene Keith* showed (1) A UTERUS WITH FIBROID, weighing 19½ lbs., from a patient aged 28. (2.) A DERMOID TUMOUR, 30 lbs. in weight, containing portions of hair, etc.

III. Discussion on Dr Leith Napier's paper on ALBUMINURIA AND REFLEX PARALYSIS.

IV. *Dr Milne Chapman* read his paper on EXTREME CYSTIC DILATATION OF THE FALLOPIAN TUBES; ABDOMINAL SECTION; RECOVERY, which appeared on page 204 of this Journal.

Dr Underhill had seen the case some five or six years ago. Tumour was not then so large nor so painful. He thought Dr Chapman was to be congratulated on his very successful treatment. Tapping was obviously quite useless.

Dr Barbour said Dr Chapman had given him an opportunity of seeing the case after the operation, and he had been much impressed by the courage and success with which the case had been attacked.

Dr Napier was much surprised at the prolonged high temperature of the patient.

Dr Macdonald thought that it betokened great courage on the rt of Dr Chapman to take this case in hand after its extra- dinary history. But the result shows that while his courage was ual to any emergency, his skill was equal to his courage, and he felt at altogether the management of the case reflected the highest edit on Dr Chapman's ability. He had himself to operate cently on a similar case, though the adhesions were not so tensive as in the case recorded, still they were very bad. The atient did well at first, but septicæmia came on, and death upervened. He hoped Dr Chapman would report on the tubes. e could offer no adequate explanation of the extraordinary tem- erature, but there could be no doubt of the accuracy of the observa- ions recorded by Dr Chapman, as both in the Royal Infirmary nd in the Incurables Hospital the observations were subjected to he most severe scrutiny. He could only suggest that the temper- ture was probably due to resorption of secretion from the cysts.

Dr Chapman thanked the Fellows for the way in which they ad received his paper.

V. *Dr Barbour* showed SECTIONS illustrating the anatomical hanges in the uterus during the third stage, and made some re- arks on them.

VI. The MATERNITY REPORTS for the Quarters ending 31st anuary 1884 and 30th April 1884, were handed in by Professor impson and Dr Macdonald.

STUDENTS' WORK.

THE medical student of to-day enters on a curriculum that differs n many respects from that of the majority of his teachers and their ontemporaries. True, the plan of the course of four years' study s not been materially altered, but the subjects of study have een so amplified, that it is often with a curious mixture of feel- ngs, in which thankfulness perhaps predominates, that the older embers of the profession are wont to say, "Ah! we passed before ll that." Time was, and not so long ago either, when all that was equired of the student was a knowledge of Anatomy and Surgery efore letting him loose to bid God-speed to the old lives passing ut of the world, or assist and welcome new ones into it. The ractitioners who were students in the earlier years of the century ell us Physiology did not exist in their time. Where would the tudent of to-day, who at his examinations did not know how the ile-secretion was affected by mercury, podophyllin, or euonymin, r who professed ignorance of the effect of varnish on a dog's skin, nd himself? Plucked, in all probability, and perhaps rightly so. nd not only Physiology, but Pathology, Materia Medica, Public edicine, and Midwifery, also have taken their rightful place in a edical examination, and woe be to him who thinks of going up with an insufficient knowledge of the "degenerations," or without appreciating the value of fœtal and pelvic diameters.

But the special feature in which the curriculum of to-day differs from that of twenty years ago is the number of practical classes which have to be attended, and that without any diminution in the attendance on what we may, in contradistinction, call the theoretical. Professors and lecturers, consumed with desire to make their students as learned as themselves, have sought to attach (and in most instances succeeded in doing so) a practical class to their courses of lectures. In order to the due reception of the reward they deserve, they are naturally anxious that the student should lose no opportunity of benefiting by the teaching they give either in their own person or by proxy. As a result, the curriculum is so crowded that few men can finish their course in four years, and he who does it leisurely in five, or even six, is sure, if he does not win the highest honours, to at least please his teachers.

But if the increase of practical classes has the disadvantage of crowding the curriculum, it has very great and obvious advantages—so great, that no student can well afford to neglect these classes even when they are not compulsory. This happy blending of the theoretical and practical has been, to our thinking, one of the chief factors in the great success of the Scottish schools; but it is one which many students are very apt to overlook. Some err in one direction, others in the opposite. While some men are all for reading, their fellows consider lectures and text-books needless if they put in their time in the Anatomy rooms or the Hospital. The truth probably lies between the two, though we are ready to confess our opinion to be that the practical work is decidedly the more important. No one can, however, neglect his reading any more than he can dissections, histological demonstrations, or hospital practice.

Reading is to many the most irksome and troublesome of the student's duties. It is with regard to it that junior students more particularly are liable to make mistakes. Some men will devote too much time to their books, others will give too little. It is useless to lay down a law that can be followed by every one. Each man must find out for himself how many hours he can devote to reading *with profit*, and he should never attempt to exceed. By reading with profit, we mean reading so that what is read can be assimilated and become, so to speak, a part of one's self. So long as the brain is fresh and active, the process of assimilation may go on readily enough, but if the reading be too long continued, that organ becomes jaded and wearied, and the effect is not unlikely to be similar to that which sometimes follows the overloading of a stomach whose walls are too sensitive to tolerate the presence of indigestible matter. The entire unassimilated reading is likely to be lost. What to read is a question which very often puzzles students; and when we consider what is one of the commonest features of the lecture which introduces the pupil to the work of his class, we do not wonder. The lecturer usually appears with a goodly array of text-books in front of him. These have in most instances been supplied by the booksellers for the purpose of advertising their stores. In some instances one work is singled out as *the* text-book for the class. Where this is done, mistakes are not likely to follow, but in other instances the student is left to choose for himself out of perhaps a dozen works, all equally good. What wonder, if he happens to be possessed of a little spare cash, and is desirous of showing well-filled bookshelves, that he should seek to have most, if not all, the works that are exhibited at the introductory lecture? Yet there can be no greater mistake. Several works on the same subject can only have the effect of confusing that subject in the mind of the beginner. He should be emphatically a man of one book. The advice has been given before, and it is a good advice, that such a book—the book for a beginner—should be the work of a compiler rather than of an original investigator. We would even go further, and say that if good and full notes can be taken of a systematic course of lectures, the student in most instances would do well to trust to them alone till he has passed his examinations. If the lecturers are good, the notes may be useful long after that event. Each one will find out for himself what to him will be the best method of note-taking. If the student can write it, shorthand will be found of the utmost value. It is a mistake to suppose that shorthand notes require transcribing. If taken with any approach to neatness, as we maintain they can in the case of Edinburgh lecturers at least, they may be readily deciphered years after. We ourselves have notes taken in this way to which we continually refer in preference to the text-books which were at the time prescribed, but seldom opened. For purposes of ready reference we found it a convenient method to divide the page into two columns,—the right hand column being the larger of the two. It was devoted to the shorthand notes taken in the class. In the other column were marked at after-readings a few of the principal words and headings, which acted as a ready guide when reference was made to a particular subject. Good notes, whether in longhand or shorthand, will undoubtedly save much time and labour. They are taken down from the teacher's lips. They serve to recall the illustrations he has used, and oral instruction with illustration has always been recognised as superior to mere reading. The method of reading is all-important. Some are content if they can but remember what they have read till such time as examinations are passed. It is almost needless to say that this method is an unfortunate one. It is more,—it is hurtful. The reading done in this way is not intelligent. It is labour lost. If the student desires to profit by his books or notes, it is necessary that he should consider well what he reads,—that he should ask himself if he comprehends the author's meaning, and that he should not pass on to anything fresh in the work till he has thoroughly mastered what has gone before. The process is perhaps irksome at first, but it is wonderful how labour is lightened by it afterwards.

If we have spoken thus far of the student's reading, it is not from any desire to make it appear more important than his other duties. It is because, as we have already said, many of those who are ready enough with scalpel and forceps, with microscope and stethoscope, are apt to neglect it on account of the trouble it involves, and the strain upon the attention which it calls for. But we have absolutely no sympathy with the tendency that has been shown of late years by some professors and lecturers to give more theoretical teaching, and go into scientific details with such minuteness, that their course is spread over two sessions instead of being confined to one, as it ought to be. We would prefer to see instead of this more bedside teaching given. Clinical teaching, which renders the student familiar with the various phases of disease and the best modes of curing or preventing these, is after all the most important part of his training. In order to appreciate this clinical teaching aright, he must of course be familiar with the structure and the functions of the human body; but it is in the dissecting-rooms and laboratories, and not in the lecture-room, or from text-books, that he will gain a sound knowledge of these subjects. Let him then devote himself to practical work, to observation at the bedside, and to the examination of diseased organs as they are found in the pathological theatre and museums. The museums are too much neglected by our students. The Anatomical Museum in the University, and that in the hall of the Royal College of Surgeons, are rich in valuable and instructive specimens; but how seldom are they taken advantage of. To make a good diagnosis, an acquaintance with diseased structures and a knowledge of their effect on the functions of the body are very necessary; and it goes without saying that he who makes a correct diagnosis is, if he be not too much absorbed in mere pathology, most likely to give his patient what will be for him or her the best mode of treatment.

We have recommended the student to be in the beginning a man of one book, but we are very far from advising him to continue so. If he has at first been contented with a compilation, he should afterwards seek to make himself familiar with the works of original investigators. Studies ought not to end with college days. The best practitioner is he who continues to be a student, who seeks to learn something from his own cases as well as those recorded by others. Insular prejudices will not prevent him from recognising the great benefit to be derived from the perusal of German, French, and American as well as English authors; but let him beware of giving a too ready credence to everything he may read. Much of it he must receive in a spirit of scientific scepticism, refusing to affix his faith to it till he has tried it and proved it to be true. But above all things he must remember that he is a physician, and that what he has to deal with are the bodies—aye, and though he may not think it or may not believe it—the souls also of his fellow-men. His business is to cure and prevent disease when he can,—to alleviate the suffering when he cannot effect the cure. As this work of his life increases upon him, much of the scientific details he has been taught will be forgotten. He cannot help himself. It is given to very few to be both learned scientists and at the same time successful battlers with disease. The young practitioner may be desirous of prosecuting the scientific investigations which have fascinated him in the days of his studentship; but if so, let him ponder the advice of one well fitted to speak on this matter. We refer to O. W. Holmes, the Emeritus-Professor of Anatomy in Harvard University. "Take down your sign," says he, "or never put it up. That is the way Dr Owen and Dr Huxley, Dr Agassiz and Dr Jeffries Wyman, Dr Gray and Dr Charles T. Jackson, settled the difficulty. We all admire the achievements of this band of distinguished doctors who do not practise. But we say of their work and of all pure science, as the French officer said of the charge of the six hundred at Balaclava, 'C'est magnifique, mais ce n'est pas la guerre'—it is very splendid, but it is not a practising doctor's business. His patient has a right to the cream of his life, and not merely to the thin milk that is left after 'science' has skimmed it off. The best a physician can give is never too good for his patient."

And now we have almost done. It but remains for us to welcome intending students to the studies which are required for entrance to our profession. To those who have passed these preliminaries we give the right hand of fellowship, and welcome them as fellow-workers in the great service of humanity; but let them neither be over-confident in their own powers, nor discouraged by the difficulties that will arise. They will find that there is much of what they may be inclined to regard as drudgery in the practising doctor's life. Not a little of our work is unremunerative and thankless. We hear often enough of the nobility of the profession; but we do not know that in consequence much worldly wealth accrues to its individual members. Few of the medical men who have left fortunes behind them have made these fortunes by the practice of their profession. It would even seem, if we are to trust a reverend divine who has been communicating his ideas recently to one of the New York journals, that in that profession which of all others might have been considered the least money-making,—in the clerical profession, which is believed to look for its reward in a heavenly rather than in an earthly kingdom,—an earnest young man, other things being equal, is more likely to do well, in a worldly sense, than he is as a medical practitioner. But if difficulties and troubles come, he must be friendless indeed who does not receive advice and help from those who have experienced these self-same troubles before. The etiquette of the profession, which outsiders profess to find so bewildering, is but the application of the golden rule—to do to others as we would have others do to us. Young men entering the profession, and encountering the trials that fall to the lot of a beginner, will find the older members, in obedience to this etiquette (with the exception, perhaps, of a few black sheep that are not worth the counting), ever ready to give kindly advice and encouragement to those who stand in need of them. Let them, therefore, take courage; and what is given them to do let them do it with their might, however humble it may be. They must not expect that their life's work will always be such as shall make them in the eyes of men great and famous. It has been well said that the reward of workers is not fame, but the consciousness of having done something toward the good of others; and above all, there is the reward of Him who observes all workers—

> "We pass. The path that each man trod
> Is dim, or will be dim with weeds.
> What fame is left for human deeds
> In endless age? It rests with God."

INFORMATION REGARDING MEDICAL EDUCATION AND EXAMINATIONS.

THE following are the Regulations of the General Medical Council for the Registration of Medical Students:—

EXTRACT FROM MINUTE OF MEETING OF GENERAL MEDICAL COUNCIL OF JULY 14, 1880.—Moved by Mr Turner, seconded by Sir James Paget, and agreed to:—"That the General Council's amended *Recommendations on Education and Examination* be communicated to the several Examining Boards whose Examinations are recognised by the Council; that their attention be drawn to the changes which have been made; that they be informed that the Council proposes that the additional requirements be not made obligatory on students till January 1, 1882; and that, on and after that date no person be allowed to be registered as a Medical Student unless he shall have previously passed a Preliminary Examination in the subjects of General Education as specified in the following list:—1. English Language, including Grammar and Composition;[1] 2. English History; 3. Modern Geography; 4. Latin, including Translation from the original, and Grammar; 5. Elements of Mathematics, comprising (*a*) Arithmetic, including Vulgar and Decimal Fractions; (*b*) Algebra, including Simple Equations; (*c*) Geometry, including the first two books of Euclid or the subjects thereof; 6. Elementary Mechanics of Solids and Fluids, comprising the Elements of Statics, Dynamics, and Hydrostatics;[2] 7. One of the following optional subjects:—(1) Greek; (2) French; (3) German; [(4) Italian; (5) any other Modern Language; (6) Logic; (7) Botany; (8) Elementary Chemistry.]"[3]

The following Testimonials of having passed the Preliminary Examination in General Education are accepted by the Colleges:—

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[1] The General Medical Council will not consider any Examination in English sufficient that does not fully test the ability of the candidate—(1) To write sentences in correct English on a given theme, attention being paid to spelling and punctuation as well as to composition; (2) to write correctly from dictation; (3) to explain the grammatical construction of sentences; (4) to point out the grammatical errors in sentences ungrammatically composed, and to explain their nature; and (5) to give the derivation and definition of English words in common use.

[2] This subject may be passed either as Preliminary, or before, or at the first Professional Examination.

[3] The Preliminary Examinations for the License of the Royal College of Surgeons do not include the subjects between brackets, but if they have been passed at any of the Examinations recognised by the General Medical Council, they will be accepted as optional subjects in conformity with the above Regulations.

(1.) UNIVERSITIES OF THE UNITED KINGDOM.

ford.—Examination for a Degree in Arts. Responsions, Moderations,
l Examinations (Senior), Certificate to include Latin and Mathematics.
l Examinations (Junior), Certificate to include Latin and Mathematics;
also one of the following optional subjects:—Greek; French; German,
ral Philosophy, including Mechanics, Hydrostatics, and Pneumatics.

mbridge.—Examination for a Degree in Arts. Previous Examination.
l Examinations (Senior), Certificate to include Latin and Mathematics.
l Examinations (Junior), Certificate to include Latin and Mathematics,
also one of the following optional subjects:—Greek; French; German;
ral Philosophy, including Mechanics, Hydrostatics, and Pneumatics.
er Local Examinations.

rham.—Examination for a Degree in Arts. Examination for Students in
second and first years. Registration Examination for Medical Students.
l Examinations (Senior), Certificate to include Latin and Mathematics.
l Examinations (Junior), Certificate to include Latin and Mathematics,
also one of the following optional subjects:—Greek; French; German;
ral Philosophy, including Mechanics, Hydrostatics, and Pneumatics.

ford and Cambridge Schools' Examination Board.—Certificate to include
lish Language, including Grammar and Composition; Arithmetic, including
ar and Decimal Fractions; Algebra, including Simple Equations;
metry, First two books of Euclid; Latin, including Translation and
nmar; and one of the following optional subjects:—Greek, French, Ger-
, Natural Philosophy, including Mechanics, Hydrostatics, and Pneumatics.

ndon.—Examination for a Degree in Arts. Preliminary Scientific (M.B.)
nination. Matriculation Examination.

erdeen, Edinburgh, Glasgow, and St Andrews.—Examination for a Degree
rts. Preliminary Examination for Graduation in Medicine or Surgery.

inburgh, Aberdeen, and St Andrews.—Examination of (Senior) Candidates
onorary Certificates under the Local Examinations of these Universities.

inburgh.—Entrance Examination for a Three Years' Course in Arts.

blin.—Examination for a Degree in Arts. Entrance Examination.

een's University (Ireland).—Examination for a Degree in Arts. Entrance
nination. Examination for Diploma of Licentiate in Arts. Previous
nination for B.A. Degree. Local Examinations, including all the subjects
ired.

yal University of Ireland.—Matriculation Examination.

2.) OTHER BODIES NAMED IN SCHEDULE (A) TO THE MEDICAL ACT.

yal College of Surgeons of England.—Examination conducted under the
intendence of the College of Surgeons, by the Board of Examiners of the
l College of Preceptors.

e Society of Apothecaries of London.—Examination in Arts.

yal Colleges of Physicians and Surgeons, Edinburgh.—Preliminary Exami-
n in General Education, conducted by a Board appointed by these two
ges combined.

ulty of Physicians and Surgeons of Glasgow.—Preliminary Examination
neral Literature.

yal College of Surgeons in Ireland.—Preliminary Examination, Certificate
lude all the subjects required.

othecaries' Hall of Ireland.—Preliminary Examination in General Education.

3.) EXAMINING BODIES IN THE UNITED KINGDOM NOT INCLUDED IN SCHEDULE (A) TO THE MEDICAL ACT.

yal College of Preceptors.—Examination for a First or Second Class
ficate of First or Second Division, Algebra, Geometry, Latin, and a
rn Language having been taken.

ermediate Education Board of Ireland; Junior, Middle, and Senior Grades.

—Certificate to include all the subjects required by the General Medical Council.

The Examiners for Commissions and Appointments in Her Majesty's Service, Military, Naval, and Civil.—Certificate to include all the subjects required by the General Medical Council.

(4.) INDIAN, COLONIAL, AND FOREIGN UNIVERSITIES AND COLLEGES.

Universities of Calcutta, Madras, and Bombay.—Entrance Examination Certificate to include Latin.

M'Gill College, and Bishop's College, Montreal.—Matriculation Examination.

University of Toronto, Trinity College, Toronto, Queen's College, Kingston, and Victoria College, Upper Canada, University of Manitoba.—Matriculation Examination.

King's College, Nova Scotia.—Matriculation Examination. Responsions.

Medical College, Halifax, Nova Scotia.—Matriculation Examination.

University of Fredericton, New Brunswick.—Matriculation Examination.

Dalhousie College and University, Halifax, Nova Scotia.—Matriculation and Sessional Examinations.

University of California.—Examination in Department of Letters.

University of Melbourne.—Matriculation Examination, Certificate to include all the subjects required by the General Medical Council.

University of Sydney.—Matriculation Examination.

University of the Cape of Good Hope.—Matriculation Examination, Examination for a Degree in Arts.

University of Adelaide.—Matriculation Examination. Primary Examination.

Codrington College, Barbadoes.—1. English Certificate for Students of two years' standing, specifying the subjects of Examination. 2. Latin Certificate, or "Testamur."

Tasmanian Council of Education.—Examination for the Degree of Associate of Arts, Certificate to include Latin and Mathematics.

Christ's College, Canterbury, New Zealand.—Voluntary Examinations. Certificate to include all the subjects required by the General Medical Council.

University of New Zealand.—Entrance Examination.

University of Otago, New Zealand.—Preliminary Examination.

Ceylon Medical College.—Preliminary Examination (Primary Class).

Germany and other Continental Countries.—Gymnasial Abiturienten Examen, and Corresponding Entrance Examination to the Universities.

Gymnasia of the Circuit of Dorpat.—Examinations of Maturity.

The following pages contain a tabular abstract of the regulations of the various Licensing Boards, as well as a list of the Hospitals, Dispensaries, etc., attached to our Scotch Medical Schools; also the regulations for the Army, Indian, and Navy Medical Services. The space at our disposal does not allow of more detailed information. But, in point of fact, the regulations of all Licensing Boards now correspond much more closely than they used to do, and the regulations of the General Medical Council afford a key to the general requirements of all of them. For special information, application should always be made to the Secretaries of the Licensing Boards; or, in the case of the Universities, recourse may be had to the published Calendars.

The *Preliminary Examinations* are usually held before the commencement, and at the end, of the Winter Session,—viz., in October, March, or April—sometimes also at the end of the Summer Session. The Professional Examinations in Universities are usually after the Winter and during the Summer Sessions; in Edinburgh, however, the first Professional is held in October as well as April. The other Licensing Boards' examinations are held at various periods throughout the year. Special examinations, under circumstances of urgency, can be held at almost any time; but they, of course, entail considerable addition to the expense.

	Age.	Anatomy.	Dissections.	Chemistry.	Practical Chemistry.	Materia Medica.	Physiology or Institutes of Medicine.	Surgery.	Practice of Medicine.	Midwifery.	Medical Jurisprudence.	Pathology or Morbid Anatomy.	Botany.	Natural History.	Practical Pharmacy.	Clinical Surgery.	Clinical Medicine.	Hospital Attendance.	Practical Midwifery.	Dispensary or Out-door Practice.	Vaccination.
	Years.	Mons.	Mons.	Mons.	Mons.	Mons.	Mons.	Mons.	Mons.	Mons.	Mons.	Mons.	Mons.	Mons.	Mons.	Mons.	Mons.	Mons.	Mons.	Mons.	
Edinburgh University, M.B. & C.M., . . .	21	6	6	6	3	6	6	6	6	6	3	6	3	3	3	6	6	24	3 mos. or 6 cas.	6	
University of Glasgow, M.B. & C.M., . . .	21	6	6	6	3	6	6	6	6	6	3	6	3	3	3	6	6	24	do.	6	
University of Aberdeen, M.B. & C.M., .	21	6	6	6	3	6	6	6	6	6	3		3	3	3	6	6	24	do.	6	
University of St Andrews, M.B. & C.M., .	21	6	6	6	3	6	6	6	6	6	3	6	3	3	3	6	6	24	do.	6	
London University, M.B., ...	21	6	12	6	1 crs.	1 crs.	6	6	6	1 crs.	1 crs.	1 crs.			1 crs.	2 yrs.	2 yrs.	4 yrs.	20 cas.	6	
University of Durham, M.B. & M.D., . .	21																				
Dublin University, M.B., ...		6	6	6	3	3	3	6	6	6	3		3				9	24	6 mo.		
" " Surgical Diploma, .		12	18	6	3	6	18	12	6	6	3		3			27	27	27			
The Queen's University of Ireland, M.D.,		12	12	6	3	6	12	6	6	6	3		3	3	3 mos.	12	12	24	3 mo.		
Royal College of Physicians, London, .	21	12	12	6	3	3	12	6	12	3	3	6	3		3		9	24	20 cas.		
Royal College of Physicians, Edinburgh,	21	6	6	6	3	3	6	6	6	3	3	3	3		3	3	6	24	6cases		
King and Queen's Col. of Phys. Ireland, .	21	6	12	6	6	6	6	6	6	6	6		6			6	21	27	6 mo.		
Royal College of Surgeons, London,* . .	21	12	12	6		3	12*	12	6	3					3	27*	9*	33			Cert.
Royal College of Surgeons, Dublin, . .	21	18	18	6	6	3	18	18	6	3	3					18	9	27			
Royal College of Surgeons, Edinburgh, .	21	12	12	6	3	3	3	6 or 12	6	3	3	3			3	6 or 12	6	24	6 cas.	6	Cert.
Faculty of Phys. and Surgeons, Glasgow,	21	12	12	6	3	3	3	6 or 12	6	3	3				3	6 or 12	6	24	6 cas.		
For Triple Qualification by Royal Colleges Phys. and Surgs. of Edinburgh, and Faculty of Phys. and Surgs. of Glasgow, ...	21	6	12	6	3	3	6	6	6	3	3	3			3	6	6	24	6 cas.	6	Cert.
For Double Qualification by Royal Colleges Phys. and Surgs. of Edinburgh,	21	12	12	6	3	3	3	6 or 12	6 or 12	3	3	3			3	6 or 12	6 or 12	24	6 cas.	6	Cert.
For Double Qualification by Royal College Phys. Edinburgh, and Faculty of Physicians and Surgeons of Glasgow,	21	12	12	6	3	3	6	6 or 12	6	3	3	3			3	6 or 12	12	24	6 cas.		
Apothecaries' Hall, England, ...	21	12	6	6	3	3	6		12	3	3	6	3		Appr.		27	27	20 cas.		9 mo.
" " Ireland, ...	21	6	12	6	3	3	6	6	6	6	3		3		Appr.	9	18	27	20 cas.		

English Poor-Law Board.—Candidates for the appointment of Medical Officer are required to be registered under the Medical Act, and must be legally qualified to practise both Medicine and Surgery, in virtue of Diplomas or Licenses granted by competent legal authority in England, Scotland, or Ireland.

Information respecting exceptions to these regulations under various circumstances, and other details as to the order in which, according to some Licensing Bodies, the courses should be taken out, etc., must be obtained by consulting the published Charts of the Colleges, etc. Students should apply to the Secretary to each Board which they intend to pass for a detailed copy of its Regulations.

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* Students from the Schools of Scotland are admitted to examination at the Royal College of Surgeons of England, if they have followed the course of study required by the regulations of the Royal College of Surgeons of Edinburgh. Students in Scotland, therefore, are not required to attend more than one course of Physiology, six months Clinical Surgery, six months Clinical Medicine, and twenty-four months hospital.

MEDICAL SCHOOLS OF SCOTLAND, 1884–85.

WINTER SESSION.

SUBJECTS.	UNIVERSITY OF EDINBURGH.	SCHOOL OF MEDICINE, EDINBURGH.	UNIVERSITY OF GLASGOW.	ANDERSON'S COLLEGE, GLASGOW.	GLASGOW ROYAL INFIRMARY SCHOOL OF MEDICINE.	WESTERN MEDICAL SCHOOL, GLASGOW.	UNIVER OF ABERDE
Anatomy, Systematic and Practical, with Demonstrations.	Professor Turner.	Mr J. Symington and Mr Macdonald Brown.†	Professor Cleland.	Dr A. M. Buchanan.	Mr H. E. Clark.	Mr J. T. Carter.	Profess Struth
Physiology, or Institutes of Medicine.*	Professor Rutherford.	Dr James and Mr James Hunter.†	Professor M'Kendrick.	Dr James Christie.	Dr John Barlow.	Dr Limont.	Profess Stirlin
Chemistry, and Practical and Analytical Chemistry.	Professor C. Brown.	Dr Macadam, Mr King, Mr I. Macadam, and Dr Drinkwater.	Professor J. Ferguson.	Professor Dittmar.	Dr James M. Milne.	...	Profess Brazie
Materia Medica and Therapeutics.	Professor Fraser.	Dr Moinet and Dr Wm. Craig.†	Professor Charteris.	Dr Morton.	Dr John Dougall.	...	Profess Davids
Practice of Medicine.	Professor Grainger Stewart.	Drs Wyllie, Affleck, and Bramwell.†	Professor Gairdner.	Dr S. Gemmell.	Dr J. W. Anderson.	Dr M'Vail.	Prof. Sm Sham
Surgery.	Professor Chiene.	Mr Duncan, Mr Miller, Dr C. W. MacGillivray, and Mr C. W. Cathcart.	Professor Macleod.	Dr Dunlop.	Dr W. Macewen.	Dr Knox.	Profess A. Ogst
Midwifery, etc.	Professor Simpson.	Drs H. Croom, C. Bell, P. Young, Ang. Macdonald, D. B. Hart.†	Professor Leishman.	In Summer.	In Summer.	Dr W. L. Reid.	Profess Stephen
Natural Philosophy.	Professor Tait.	...	Professor Sir Wm. Thomson.	Prof. Blyth.	...	...	...
Natural History.	Professor Cossar Ewart.	...	Professor Young.	...	...	...	Professo Nichols
General Pathology.	Professor Greenfield.	Dr A. Bruce.	...	At Royal or Western Infirmary.	In Summer.	At Western Infirmary.	Profess Hamilt
Clinical Medicine.	Professors Maclagan, G. Stewart, Fraser, Greenfield, and Simpson.	Drs Muirhead, Brakenridge, and Wyllie.‡	Prof. M'Call Anderson and Prof. Gairdner.	The Physicians of the Royal Infirmary.		Physicians of the Western Infirmary.	Drs Smi Sham Beverid and Fra
Clinical Surgery.	Professor Annandale.	Mr Joseph Bell.	Prof. George Buchanan and Prof. Macleod.	The Surgeons of the Royal Infirmary.		Surgeons of the Western Infirmary.	Drs Ogst O. Will, Garde

Lectures are given in Edinburgh during the Winter Session on the Diseases of the Ear b Kirk Duncanson, on Diseases of the Eye by Dr John Robertson, on Diseases of Children b James Andrew and Dr James Carmichael, and on Diseases of the Skin by Dr Allan Jamieson.

Practical Physiology is taught by the respective professors during the Winter Sessio Edinburgh and in Summer at Aberdeen.

Practical Surgery is taught during the Winter Session in the University of Aberdee Professor Ogston and Assistant.

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* This course is equivalent to that given under the name of General Anatomy and Physiolog the English Schools. Special schedules are issued by the London Boards for their Scotch stud *which should always be inquired for.*

† *These are not conjoint courses, but separate ones by the gentlemen named.*

‡ *This is a joint course.*

MEDICAL SCHOOLS OF SCOTLAND, 1885.

SUMMER SESSION.

ECTS.	UNIVERSITY OF EDINBURGH.	SCHOOL OF MEDICINE, EDINBURGH.	UNIVERSITY OF GLASGOW.	ANDERSON'S COLLEGE, GLASGOW.	GLASGOW ROYAL INFIRMARY SCHOOL OF MEDICINE.	WESTERN MEDICAL SCHOOL, GLASGOW.	UNIVERSITY OF ABERDEEN.
al Ana- r and trations.	Professor Turner.	Mr J. Symington and Mr Macdonald Brown.*	Professor Cleland.	Dr A. M. Buchanan.	Mr H. E. Clark.	Mr J. T. Carter.	Professor Struthers.
any.	Professor Dickson.	Mr A. N. M'Alpine.	Professor Bayley Balfour.	Prof. Wilson.	...	...	Professor J. W. H. Trail.
eria lica.	Professor Fraser.	Dr Moinet and Dr Craig.*	Professor Charteris.	Dr Morton.	In Winter.	...	Professor Davidson.
ery, etc.	Professor Simpson.	Drs Angus Macdonald, Croom, Chas. Bell, P. Young, and Berry Hart *	Professor Leishman.	Dr A. Wallace.	Dr James Stirton.	Dr W. L. Reid.	Prof. W. Stephenson.
lical rudence nd Health.	Professor Maclagan.†	Dr Littlejohn.†	Professor Simpson.‖	Dr Alex. Lindsay and Dr Christie.	Mr John Glaister.	...	Professor M. Hay.†
arative tomy.	Professor Turner.	Mr Macdonald Brown.	Professor Young.‖	...	...	...	Professor Struthers.
tical iology, ading ology.	Professor Rutherford.	Mr James Hunter.	Professor M'Kendrick.	Dr James Christie.	Dr Barlow.	Dr Limont.	Professor Stirling.
tical ology, ading ology.	Professor Greenfield.	Dr A. Bruce.	Dr Joseph Coats.	Dr Newman, at Royal Infirmary.	Dr Newman.	At Western Infirmary.	Professor Hamilton.
cal and lytical istry.	Professor Crum Brown.	Dr Macadam, Mr King, Mr I. Macadam, Dr Drinkwater.	Professor J. Ferguson.	Professor Dittmar.	Dr J. M. Milne.	...	Professor Brazier.
ative gery.	Professor Chiene.	Mr Duncan, Mr Miller, Dr C. W. MacGillivray,* Mr C. W. Cathcart.	Professor Macleod.	Dr Dunlop.	Dr W. Macewen.	Dr Knox.	Professor A. Ogston.
Diseases.	Dr Clouston.	Dr J. B. Tuke.	Dr Yellowlees.	...	Dr Alex. Robertson.	...	Dr Reid.
History.	Professor Cossar Ewart.	Dr A. Wilson	Professor Young.	...	...	...	Professor Nicholson.
nical licine.	Professors G. Stewart, and T. R. Fraser.	Drs Muirhead, Brakenridge, and Wyllie.‡	Prof. M'Call Anderson and Prof. Gairdner.	The Physicians of the Royal Infirmary.		Physicians of Western Infirmary.	...
Surgery.	Professor Annandale.	Mr Joseph Bell.	Prof. George Buchanan and Prof. Macleod.	The Surgeons of the Royal Infirmary.		Surgeons of Western Infirmary.	...

tive Surgery is taught during the Summer in Edinburgh by Mr Duncan, Mr Miller, Dr MacGillivray, and
cart, and in Glasgow by Professor Macleod and Dr Knox. Instruction in Vaccination is also given at
al Public Dispensary, Edinburgh, on Wednesdays and Saturdays at 12, both Summer and Winter, by Dr
l; at the Faculty Hall, Glasgow, on Mondays at 12, by Dr Thomson; and at the Royal Infirmary,
, on Mondays and Thursdays at 12 o'clock, by Dr Tannahill, and Dr M'Vail, at Western Infirmary, on
s at 1 P.M. Medical Psychology and Insanity are taught in Summer by Dr Clouston and Dr J. B. Tuke
burgh, in Glasgow by Dr Yellowlees and Dr Robertson, and in Aberdeen by Dr Reid; Practical Medicine
lical Diagnosis by Dr Byrom Bramwell in Edinburgh; the Diseases of Children by Drs Andrew and
nal in Edinburgh; the Diseases of the Eye by Dr D. Argyll Robertson, Dr John Robertson, and Mr
Berry in Edinburgh, Professor A. Dyce Davidson in Aberdeen, and by Dr Thomas Reid, Mr Clark, and
s in Glasgow; the Diseases of the Ear by Dr Kirk Duncanson, and Ear and Throat by Dr M'Bride in
gh, and of the Ear by Dr J. P. Cassells, Dr Johnston Macfie, Dr Barr, and Dr Walker Downie in Glas-
l in Aberdeen, Ear and Larynx Diseases, by Dr M'Kenzie Booth; Diseases of the Skin by Dr Allan
n in Edinburgh, and in Aberdeen by Dr Garden; and Dental Surgery by Dr J. C. Woodburn in Glasgow,
Williamson in Aberdeen. Lectures on Public Health are delivered during the Summer Session in Aber-
Dr Simpson.

se are not conjoint courses, but separate ones by the gentlemen named.
Hay delivers his courses in Winter, but Practical Toxicology is taught in Summer. Dr Littlejohn gives
during both the Winter and Summer Sessions. Dr Maclagan also lectures during both Summer an
. The Winter Course *is chiefly intended for* law students, but is open to medical students also.
is a joint course. ‖ *In Winter.*

⁎ *For additional Summer Courses* on special subjects, see the Prospectus of each School.

LIST OF HOSPITALS, DISPENSARIES, ETC., IN CONNEXION WITH THE MEDICAL SCHOOLS OF SCOTLAND.

EDINBURGH.

Royal Infirmary, including Lock Hospital. Upwards of 600 Beds. Visits daily from 12 till 2 p.m. Consulting Physicians, Dr D. R. Haldane and Dr Geo. W. Balfour; Dr Alex. Keiller (for Diseases of Women). Physicians, Professors Maclagan, Grainger Stewart, Fraser, and Greenfield; Professor Simpson and Dr Angus Macdonald (for Diseases of Women); Drs Claud Muirhead, D. J. Brakenridge, and John Wyllie. Assistant Physicians, Drs James O. Affleck, Andrew Smart, and Alex. James; Dr J. Halliday Croom (for Diseases of Women). Extra Physician, Dr Allan Jamieson (for Diseases of the Skin). Consulting Surgeons, Dr Dunsmure and Dr Gillespie. Surgeons—Professors Annandale and Chiene, Mr Joseph Bell, Mr John Duncan, and Mr A. G. Miller. Extra Surgeons, Dr P. H. Watson; Dr Thomas Keith (for Ovarian Diseases). Assistant Surgeons, Drs P. H. Maclaren, John Bishop, Chas. W. MacGillivray, J. M. Cotterill, and Chas. W. Cathcart. Ophthalmic Surgeon, Dr Argyll Robertson. Assistant Ophthalmic Surgeon, Dr George A. Berry. Dental Surgeon, Dr John Smith. Aural Surgeon, Dr P. M'Bride. Pathologist, Dr Byrom Bramwell.

Convalescent House, Corstorphine. Surgeon, Dr Bishop.

Chalmers Hospital for the Sick and Hurt. 24 Beds for medical and surgical patients. Physician, Dr Halliday Douglas. Surgeon, Dr P. H. Watson.

Royal Maternity and Simpson Memorial Hospital. 30 Beds; from 200 to 300 in-patients and about 500 out-patients yearly. Consulting Physicians, Drs Moir and Graham Weir. Consulting Surgeon, Dr Dunsmure. Physicians, Dr Keiller, Professor Simpson, Drs Halliday Croom and Angus Macdonald. Assistant Physicians, Drs Underhill and Berry Hart. Secretary and Treasurer, J. Turnbull Smith, C.A.

Royal Hospital for Sick Children. 80 Beds; number of out-patients for 1883, 10,045. Consulting Physicians, Dr C. Wilson, Dr Graham Weir, Dr Geo. W. Balfour, and Dr R. Peel Ritchie. Consulting Surgeon, Professor Annandale. Pathologist, Dr G. L. Woodhead. Physicians, Drs J. Dunsmure, jun., J. Andrew, C. E. Underhill, and Jas. Carmichael. Extra Physicians, Drs Playfair, Burn Murdoch, and F. W. Dyce Fraser. Surgeon-Dentist, Dr Smith. Ophthalmic Surgeon, Dr Argyll Robertson.

Royal Public Dispensary and Vaccine Institution. About 12,000 patients annually. Consulting Physician, Dr Haldane. Consulting Surgeon, Dr Littlejohn. Medical Officers, Drs W. Husband, D. Wilson, Andrew, Moinet, Sinclair, Allan Jamieson, Cotterill, Waller, A. Husband, Spence, P. Young, Dyce Fraser, A. Black, and Caird. Consulting Physicians-Accoucheur, Drs Keiller and Charles Bell. Midwifery and Diseases of Women, Drs Andrew and Young. Diseases of the Skin, Dr A. Jamieson. Vaccination, Dr W. Husband. Apothecary, Mr John Nicol. Clinique daily at 3 p.m. Vaccination, Wednesday and Saturday, 12 noon. Midwifery and Diseases of Women, Tuesday and Friday, 1 p.m. Diseases of the Skin, Wednesday and Saturday, 1 p.m. Laboratory, 3 p.m. and 7 p.m. Secretary, R. C. Gray, S.S.C. James Andrew, M.D., Secretary to the Medical Officers.

New Town Dispensary. About 10,000 patients annually. Medical Officers, Drs Cadell, Gibson, Wood, Caverhill, Johnston, and Hodsdon. Acting Physicians-Accoucheur, Drs Dunsmure, jun., and Underhill. Superintendent of Vaccination, Dr Affleck. Diseases of the Ear and Throat, Drs Blair Cunynghame, M'Bride, and Blaikie. Diseases of the Eye, Dr Berry. Diseases of Women, Dr Hart. Clinique daily at 2 p.m. Vaccination on Tuesdays and Fridays from 12 to 1.

ROYAL ASYLUM FOR THE INSANE. About 850 patients, about 300 of whom are private patients. Physician, Dr Clouston.

EYE, EAR, AND THROAT HOSPITAL, 6 Cambridge Street, Lothian Road, Edinburgh. Consulting Surgeon, Joseph Bell, F.R.C.S. Surgeons, J. J. Kirk Duncanson, M.D., F.R.C.P.E., G. Hunter Mackenzie, M.D., and J. Maxwell Ross, M.A., F.R.C.S. Eye Clinique daily at 1 P.M. Ear Clinique on Mondays, Thursdays, and Saturdays, at 12 noon. Throat Clinique on Tuesdays and Fridays at 4 P.M.

EYE DISPENSARY, 54 Cockburn Street. About 2000 patients annually. Surgeons, Mr Walker and Mr Berry. Assistant Surgeon, Mr Caverhill. Open Mondays, Wednesdays, and Fridays, at 1 P.M.

DENTAL HOSPITAL AND SCHOOL, 30 Chambers Street. Consulting Physician, Alexander Peddie, M.D., F.R.C.P.E. Consulting Surgeon, Joseph Bell, F.R.C.S.E. Consulting Dental Surgeon, John Smith. M.D., LL.D., P.R.C.S.E. Dental Surgeons, Messrs C. Matthew, W. B. Macleod, M. Finlayson, A. Wilson, M. Macgregor, G. W. Watson, and Edwin A. Cormack. Assistant Dental Surgeons, J. S. Durward, James Mackintosh, James Lindsay, W. Forrester, John S. Amoore, and J. G. Munro. Tutorial Dental Surgeon, John Stewart. Dean and Hon. Treasurer, W. Bowman Macleod. Secretary, James Robertson, Solicitor, 4 Lindsay Place, Edinburgh. Daily, 9 to 10 A.M. Average number of patients, 6000 per annum.

SCHOOL OF MEDICINE, Marshall Street, Nicolson Sq.—See Advertisement.

GLASGOW.

ROYAL INFIRMARY. 542 Beds. Visit daily at 9 A.M. Dispensary Hour, 2 P.M. Physicians, Drs Scott Orr, Wood Smith, Perry, and Alex. Robertson. Surgeons, Drs Watson, Macewen, Dunlop, Clark, Knox, and Lothian. Gynæcologist, Dr Stirton. Aural Surgeon, Dr Macfie. Dental Surgeon, Dr Woodburn. Assistant Physicians, Drs Anderson, Dougall, Middleton, Henderson, Black, and Macphee. Assistant Surgeons, Drs Fleming, Barlow, Adams, Muir, Shaw, and Whitson. Pathologist, Dr Newman. Vaccinator, Robert Tannahill, M.D. M. Thomas, M.D., Superintendent.

WESTERN INFIRMARY. This Hospital contains about 400 Beds for Medical and Surgical patients. There are Wards for Skin Diseases and Diseases of Women, and an out-door Midwifery department. Physicians, W. T. Gairdner, M.D., T. M'Call Anderson, M.D., James Finlayson, M.D., Gavin P. Tennent, M.D. Diseases of Women, W. Leishman, M.D. Surgeons, George H. B. Macleod, M.D., George Buchanan, M.D., A. Patterson, M.D., Hector C. Cameron, M.D. Assistant-Physicians, Joseph Coats, M.D., Jas. Christie, M.D. Out-door Physicians-Accoucheur, Robert Kirk, M.D., W. L. Reid, M.D., M. Cameron, M.D. Dispensary Physicians, D. C. M'Vail, M.B., S. Gemmel, M.D. Dispensary Surgeons, John Alexander, M.D., J. C. Renton, M.B., Geo. T. Beatson, M.D., David Newman, M.D. Extra Dispensary Physician, William G. Dun, M.D. Extra Dispensary Surgeons, A. E. Maylard, M.S., Jas. Parker, M.D. Pathologist, Joseph Coats, M.D. Pathological Chemist, John Lindsay Steven, M.B. Dispensary Surgeon for Diseases of the Ear, Thomas Barr, M.D. Dental Surgeon, James R. Brownlie, L.D.S. Medical Superintendent, John Alexander, M.D. Lady Superintendent, Miss E. Clyde. Secretary, Henry Johnston, 125 Buchanan Street. The hour of visit is 9 A.M. Operating days, Wednesday and Saturday. The Dispensary for out-patients is open daily at 2 P.M.

LOCK HOSPITAL, 41 Rottenrow Street. 80 Beds. Medical Officers, Drs James Dunlop and A. Patterson. Superintendent, P. Condra. Treasurer, T. D. Findlay. Secretary, Robert Young.

Lying-in Hospital and Dispensary. 36 Beds; in-patients, 258; out-patients, 1284. Consulting Surgeon, Dr George Buchanan. Senior Consulting Physician, Professor Leishman. Consulting Physician, Dr Hugh Miller. Obstetric Physicians, Drs Samuel Sloan and W. L. Reid. Assistant Obstetric Physicians, Drs William Muir and Archibald Sloan. Out-door Physicians, Drs J. Dunlop, T. F. Gilmour, H. B. Wilson, Malcolm Black, John Ritchie, and Alexander Jamieson.

Glasgow Royal Asylum, Gartnavel. About 500 patients. Physician-Superintendent, Dr David Yellowlees. Lectures on Mental Diseases during summer, at the University and the Asylum.

Eye Infirmary. 78 Beds (1015 house patients), 13,697 out-patients annually. Senior Surgeon, Thomas Reid, M.D. Surgeons, Thomas S. Meighan, M.D., Henry E. Clark, M.R.C.S., and J. Crawford Renton, M.D. Assistant Surgeons, D. N. Knox, M.B., J. Macfie, M.D., and A. Freeland Fergus, M.B. House Surgeon, Donald J. Mackintosh, M.B., C.M. Consulting Surgeon, George Buchanan, M.D. Secretary, George Black.

Dispensary for Skin Diseases, 8 Elmbank Street. Physician, Professor M'Call Anderson. Open Mondays and Thursdays at 4 P.M., for out-door patients. This Institution is in connexion with the Wards for Skin Diseases in the Western Infirmary, to which the more important cases are sent.

Ophthalmic Institution, 126 West Regent Street. Consulting Physician, Dr S. J. Moore. Acting Surgeon, Dr J. R. Wolfe. Acting Physician, Dr J. S. Cumming. Secretary, Henry Johnston, 125 Buchanan Street. Open daily from 1 to 3 P.M. A Course of Lectures and Clinical Instruction during the Winter and Summer Sessions.

Glasgow Hospital and Dispensary for Diseases of the Ear, 239-241 Buchanan Street. 12 Beds. Hour of visit to the Hospital, 2 P.M. Out-patients seen at 2 P.M. on Mondays, Tuesdays, Thursdays, and Fridays. Number of cases treated annually, 3600. During the Winter and Summer Sessions a Course of Practical Instruction in the Treatment of Ear Disease is given to the Students attending the Clinique. Senior Consulting Physician, Dr R. Scott Orr. Senior Consulting Surgeon, Dr James Morton. Pathologist, Dr Joseph Coats. Consulting Dental Surgeon, Dr J. C. Woodburn. Physicians, Drs A. K. Irvine, A. L. Kelly, and J. Gardiner. Surgeon and Lecturer, Dr Thomas Barr.

ABERDEEN.

Royal Infirmary. Upwards of 250 Beds. Visits daily at 12 o'clock. Physicians, Drs Smith-Shand, Beveridge, and Fraser. Surgeons, Drs A. Ogston, Will, Garden, and Hall. Ophthalmic Surgeon, Dr Davidson. Pathologist, Dr Rodger. Chloroformist, Dr P. Blaikie Smith. Dental Surgeon, Dr Williamson. Treasurer, William Carnie.

General Dispensary, Lying-in and Vaccine Institution. 7900 patients annually. Open daily except Sundays.

Children's Hospital. Physicians, Drs Stephenson and Garden. Junior Physician, Dr Macgregor. Clinical instruction daily at 11 o'clock.

Lunatic Asylum. Above 570 patients. Medical Superintendents, Drs Jamieson and Reid. Treasurer, William Carnie.

Eye Institution, General Dispensary Buildings, Guestrow. Open three days in the week at 2.30 P.M. Clinical Instruction on Diseases of the Eye and the use of the Ophthalmoscope. Average, 600 patients annually.

ARMY MEDICAL DEPARTMENT.

6 WHITEHALL YARD, S.W.

EDULE OF QUALIFICATIONS NECESSARY FOR CANDIDATES DESIROUS OF OBTAINING COMMISSIONS IN THE ARMY MEDICAL DEPARTMENT.

. Every candidate for a commission in the Army Medical Department st be 21 years of age and not over 28 years at the date of commencement he competitive examination. He must produce an extract from the register his birth, or, in default, a declaration, made before a magistrate by one his parents or guardians, giving his exact age. He must also produce a ommendation from some person of standing in society—not a member of own family—to the effect that he is of regular and steady habits, and likely ery respect to prove creditable to the Department if a commission be nted; and also a certificate of moral character from the parochial clergyman, ossible.

2. The candidate must sign a declaration upon honour that both his parents of unmixed European blood, and that he labours under no mental or consti-ional disease, nor has any hereditary tendency thereto, nor any imperfection disability that can interfere with the efficient discharge of the duties of a dical officer in any climate: also that he does not hold, and has never held, y commission or appointment in the public services. His physical fitness ll be determined by a Board of Medical Officers, who are required to certify at his vision is sufficiently good to enable him to perform any surgical eration without the aid of glasses. A moderate degree of myopia will t be considered a disqualification, provided it does not necessitate the e of glasses during the performance of operations, and that no organic dis-se of the eyes exists. The Board must also certify that he is free from ganic or other disease, and from constitutional weakness, or tendency ereto, or other disability of any kind likely to unfit him for military ser-ce in any climate.

3. Certificates of age, registration of diplomas, etc., and of character, must company the declaration when signed and returned.

4. Candidates will be examined by the Examining Board in the following mpulsory subjects, and the highest number of marks attainable will be stributed as follows:—*a.* Anatomy and Physiology, 1000; *b.* Surgery, 1000; Medicine, including Therapeutics, the Diseases of Women and Children, 00; *d.* Chemistry and Pharmacy, and a practical knowledge of drugs, 100. *B.*—The examination in Medicine and Surgery will be in part practical, and ll include operations on the dead body, the application of surgical apparatus, d the examination of Medical and Surgical patients at the bedside.] The gibility of each candidate for the Army Medical Service will be determined the result of the examination in these subjects only. Examinations will o be held in the following voluntary subjects, for which the maximum mber of marks will be—French and German (150 each), 300; Natural ences, 300. The knowledge of Modern Languages being considered of at importance, all intending competitors are urged to qualify in French and rman. The Natural Sciences will include Comparative Anatomy, Zoology, tural Philosophy, Physical Geography, and Botany, with special reference to teria Medica. The number of marks gained in both the voluntary subjects l be added to the total number of marks obtained by those who shall have n found qualified for admission, and whose position on the list of successful npetitors will thus be improved in proportion to their knowledge of modern guages and natural sciences.

5. After passing this examination, every qualified candidate will be required ttend one course of practical instruction at the Army Medical School as robationer on—(1) Hygiene; (2) Clinical and Military Medicine; (3) Clinical l Military Surgery; (4) Pathology of Diseases and Injuries incident to Mili-y Service.

6. All candidates will be required to conform to such rules of discipline as the Senate may from time to time enact, and they will be required to provide themselves with uniform, viz., the regulation undress and mess uniform of a surgeon, but without sword.

7. They will be required to attend the A. M. D. Mess at Netley, and to conform to the Rules and Regulations thereof.

APPOINTMENT.

Every candidate for appointment to the Medical ranks of the Army Medical Department must possess two diplomas or licenses, recognised by the General Medical Council, one to practise Medicine, and the other Surgery, and must be registered under the Medical Act in force in the United Kingdom at the time of his appointment.

A public and open competition will be held twice in the year for the admission of qualified candidates as probationers. The number of appointments so competed for will be not less than half of the number of vacancies which shall have arisen in the last completed half-year ending on the 30th June or 31st December.

Not less than half the number of vacancies will be filled up by competition, and it will be competent for the Secretary of State for War to fill up the remaining number from such qualified candidates as may be proposed by the governing bodies of Public Schools of Medicine in the United Kingdom or in the Colonies as he may think proper. Every candidate so proposed must be certified by the governing body proposing him to be duly qualified according to a standard laid down by the Secretary of State, and shall be approved by the Director-General.

The Secretary of State for War will from time to time fix the order of precedence and the proportion in which the several Schools of Medicine shall be offered the nomination of candidates.

A Surgeon on probation, on being so nominated, will be sent to some large station for instruction in Ambulance and Hospital Corps duties, until the commencement of the next course of study at the Army Medical School. After going through such course at the Army Medical School as the Secretary of State shall decide, the Surgeon on probation, after passing a qualifying examination in the military medical subjects taught there, and satisfying the Director-General that he is a person of proper skill, knowledge, and character, for permanent appointment in the Army Medical Department, will be commissioned as Surgeon.

The Surgeons on probation who pass out of the Army Medical School at one qualifying examination will take precedence among each other as Surgeons, as follows:—(*a*.) Those appointed on nomination according to their date of joining on probation. (*b*.) Those appointed on competition according to the last day of the competitive examination, and in the order of merit at such examination, with priority over any joining under sub-section (*a*) on the last day of the competitive examination.

A Surgeon's commission will bear the date of the day of his passing out of the Army Medical School.

RANK AND PAY.

The ranks and daily rates of pay of the officers of the Army Medical Department shall be as follows:—Surgeon-General £2, 15s.; Deputy Surgeon-General, £2; Brigade Surgeon, £1, 10s., after five years in the rank, £1, 13s.; Surgeon-Major, £1, after fifteen years' service £1, 2s. 6d., after twenty years' service £1, 5s., after twenty-five years' service £1, 7s. 6d.; Surgeon, £200 a year, after five years' service £250, after ten years' service 15s. daily. Surgeon on probation 8s. Charge pay: the principal medical officer of an army in the field, consisting of 10,000 men and upwards, £1 daily; of 5000 men and upwards, 15s. daily; of less than 5000, 10s. daily. The principal medical officer of a colony re the number of commissioned officers and enlisted men is 1500 and upwards, laily.

he pay of medical officers shall be issued monthly in arrear.

he relative rank of officers of the Army Medical Department is as ›ws:—I. A Director-General and Surgeon-General rank as Major-General. A Deputy Surgeon-General ranks as Colonel. III. A Brigade Surgeon cs as Lieutenant-Colonel. IV. A Surgeon-Major ranks as Major; after nty years' service as Surgeon-Major he ranks as Lieutenant-Colonel. V. Surgeon ranks as Captain. VI. A Surgeon on probation ranks as utenant.

NON-EFFECTIVE PAY.

'he daily rates of retired pay or half-pay for Medical Officers shall be as ›ws:—Surgeon-General, £2. Deputy Surgeon-General, £1, 15s. Brigade geon, under thirty years' service, £1, 7s. 6d.; after thirty years, £1, 10s. geon-Major, after twenty years, £1; twenty-five years, £1, 2s. 6d.; after ty years, £1, 5s. Surgeon and Surgeon-Major, after ten years' service, receive a gratuity of £1250; after fifteen years' service, £1800; after hteen years' service, £2500.

ARMY MEDICAL SCHOOL.

ROYAL VICTORIA HOSPITAL, NETLEY.

'resident of the Senate.—T. Crawford, M.D., Director-General of the Army dical Department.

Iembers of the Senate.—Sir J. Fayrer, M.D., K.C.S.I., F.R.S., Physician to Council of India; Surgeon-General T. Longmore, C.B., Professor of Military gery; Surgeon-General W. C. Maclean, M.D., C.B., Professor of Military dicine; William Aitken, M.D., F.R.S., Professor of Pathology; F. S. B. F. De umont, M.D., F.R.C.S.E., F.R.S., Surgeon-Major, Professor of Military giene; The Principal Medical Officer, Royal Victoria Hospital, Netley.

ssistant Professors.—Surgeons-Major William Cherry, W. R. Tobin, T. Lewis, M.B., and Sandford Moore, M.B.

'andidates for Commissions in the Army, and in the Queen's Indian rice, proceed to Netley after passing the Examination at London. At ley they attend the Medical and Surgical Practice of the Royal Victoria spital, and learn the system and arrangements of Military Hospitals. During r months they attend the lectures given by the Professors and Assistant-fessors, and go through a course of practical instruction in the Hygienic ›oratory and Microscopical Room. The lectures and practical instruction intended to explain the specialities of Military Medical Practice, attention ıg directed to gunshot and other wounds, surgical arrangements in the field ing action and sieges, means of transport, field hospitals, tropical diseases their means of investigation, service in India and in the various colonies, the tary arrangements in peace and war, and the means of carrying out the tary regulations. Every opportunity is taken of practising operations on dead body, and practical points of a like kind.

INDIAN MEDICAL SERVICE.

ULATIONS FOR THE EXAMINATION OF CANDIDATES FOR THE APPOINTMENT OF SURGEON IN HER MAJESTY'S INDIAN MEDICAL SERVICE.

. *Limits of Age.*—All natural-born subjects of Her Majesty, between 22 28 years of age at the date of the examination, and of sound bodily health, be Candidates. They may be married or unmarried. They must ess a Diploma in Surgery, or a license to practise it, as well as a Degree Iedicine, or a license to practise it in Great Britain or Ireland.

. *Declaration to be submitted.*—They must subscribe and send in to the itary Secretary, India Office, Westminster, *so as to reach that address at* *least a fortnight before the date fixed for the Examination*, a declaration according to a prescribed form.

3. This declaration must be accompanied by the following documents:—

a. Proof of age, either by extract from the register of the parish in which the Candidate was born, or, where such extract is unattainable, by his own declaration (pursuant to the Act 5 & 6 Will. 4, c. 62), form of which can be obtained at the India Office. A certificate of baptism which does not afford proof of age will be useless.

b. A certificate of moral character from a magistrate, or a minister of the religious denomination to which the Candidate belongs, who has personally known him for at least the two years preceding the date of his application.

c. A certificate of registration, in accordance with the Medical Act of 1858, of the degrees, diplomas, and licenses possessed by the Candidate.

4. *Physical Examination.*—The physical fitness of Candidates will be determined previous to examination by a Board of Medical Officers, who are required to certify that the Candidate's vision is sufficiently good to enable him to perform any surgical operation without the aid of glasses. A moderate degree of myopia would not be considered a disqualification, provided it did not necessitate the use of glasses during the performance of operations, and that no organic disease of the eyes existed.

Every Candidate must also be free from organic disease of other organs, and from constitutional weakness, or other disability likely to unfit him for military service in India.

5. *Subjects for Examination.*—On producing the foregoing qualifications, the Candidate will be examined by the examining Board in the following compulsory subjects, and the highest number of marks attainable will be distributed as follows:—

	Marks.
a. Anatomy and Physiology, ...	1000
b. Surgery, ...	1000
c. Medicine, including Therapeutics, the Diseases of Women and Children, ...	1000
d. Chemistry and Pharmacy, and a practical knowledge of Drugs,	100

(The examination in Medicine and Surgery will be in part practical, and will include operations on the dead body, the application of surgical apparatus, and the examination of medical and surgical patients at the bedside.)

6. The eligibility of each Candidate for the Indian Medical Service will be determined by the result of the examinations in these subjects only.

7. *Voluntary Examination.*—Candidates who desire it will be examined in French, German, and Hindustani, Comparative Anatomy, Zoology, Natural Philosophy, Physical Geography, and Botany, with special reference to Materia Medica.

8. The number of marks gained in these subjects will be added to the total number of marks obtained in the obligatory part of the examination by Candidates who shall have been found qualified for admission, and whose position on the list of successful competitors will thus be improved in proportion to their knowledge of modern languages and natural sciences.

9. The maximum number of marks allotted to the voluntary subjects will be as follows:—

French, German, and Hindustani (150 each), ...	450
Natural Science, ...	300

10. *Text-Books.*—The subjects for this part of the examination will be taken from the following books:—

Animal Kingdom, by W. S. Dallas, F.L.S.

Outlines of the Structure and Functions of the Animal Kingdom, by Rymer Jones; or *Cours Elémentaire d'Histoire Naturelle*, par Milne Edwards.

Lindley's *School Botany*, Lindley's *Medical and Economic Botany*, Henfrey's *Elementary Course of Botany*.

Elements of Natural Philosophy, by Golding Bird and C. Brooks.

Physical Geography, by Mrs Somerville.

1. The Examiners in London will prepare a list in order of merit, with the ks affixed in the different subjects, to be transmitted to the Director-ieral and communicated to the Professors of the Army Medical School. If Candidate is found to be deficient in any particular subject, this shall be ed, in order that he may receive special instruction on the point at Netley.

2. *Course at Netley.*—After passing this preliminary examination, Candidates be required to attend one entire course of practical instruction at the ny Medical School, before being admitted to examination for a commission, -

(1.) Hygiene.
(2.) Clinical and Military Medicine.
(3.) Clinical and Military Surgery.
(4.) Pathology of Diseases and Injuries incident to Military Service.

hese courses are to be of not less than four months' duration; but Can-ites who have already gone through a course at Netley as Candidates for Army or Navy Medical Service may, if thought desirable, be exempted n attending the School a second time.

3. *Pay and Uniform while at Netley.*—During the period of his residence he Army Medical School, each Candidate will receive an allowance of 8s. diem with quarters, or, when quarters are not provided, with the usual ging and fuel and light allowances of subalterns, to cover all costs of ntenance; and he will be required to provide himself with uniform (viz., regulation undress uniform of a Surgeon of the British Service, but with-the sword).

4. All Candidates will be required to conform to such rules of discipline the Senate may from time to time enact.

5. *Examination at Netley.*—At the conclusion of the course, Candidates l be required to pass an examination on the subjects taught in the School. e examination will be conducted by the Professors of the School.

The Director-General, or any Medical Officer deputed by him, may be sent and take part in the examination. If the Candidate give satisfactory dence of being qualified for the practical duties of an Army Medical icer, he will be eligible for a Commission as Surgeon.

16. *Position on List of Surgeons, how determined.*—The position of the ndidates on the list of Surgeons will be determined by the combined ults of the preliminary and of the final examinations, and, so far as the re-rements of the service will permit, they will have the choice of Presidency India according to their position in that list.

NDIA OFFICE, *August* 1882.

V.B.—The examinations for admission to the Indian Medical Service ally take place twice a year, viz., in February and in August.

IEMORANDUM REGARDING THE POSITION OF MEDICAL OFFICERS TO BE APPOINTED TO HER MAJESTY'S INDIAN FORCES.

India Office, July 1884.

. This memorandum is based on the regulations in force at the present). They are subject to any alteration that may be determined on.

. *Passage to India.*—Surgeons on appointment will, if possible, be provided i passage to India by troop-ship; but when troop-ship accommodation is not lable, passage at the public expense will be provided by steamer, or a age allowance will be granted, if preferred. A charge for messing during voyage will be made at the rate of 2s. a day. This payment will not ude the cost of liquors, which will be charged for as extras.

All Surgeons who shall neglect or refuse to proceed to India under the rs of the Secretary of State for India within two months from the date of ing Netley, will be considered as having forfeited their appointments, unless ial circumstances shall justify a departure from this regulation.

. *Pay previous to Embarkation.*—The rate of pay drawn by Surgeons from date of passing the final examination at the Army Medical School until arrival in India will be 10s. a day. (For rates subsequent to their landing in India, see paras. 14, 15, and 16.)

Pay at the above rate will be issued in this country up to the date of embarkation, and an advance of two months' pay at the same rate will also be made prior to embarkation, which will be adjusted in India in accordance with the rate laid down in para. 14.

5. *Grades and Relative Rank.*—The grades of Medical Officers in the Indian Military Forces are six in number, viz.:—

1. Surgeon-General, ranking as Major-General, according to the date of his commission.
2. Deputy Surgeon-General, as Colonel, according to the date of his commission.
3. Brigade Surgeon, as Lieutenant-Colonel, according to the date of his commission, or according to the date upon which he completed twenty years' service as Surgeon and Surgeon-Major.
4. Surgeon-Major, as Major, according to the date of his commission; and after twenty years' service as Surgeon and Surgeon-Major, as Lieutenant-Colonel.
5. Surgeon, as Captain, according to the date of his commission.
6. Surgeon on probation, as Lieutenant.

6. *Promotion.*—A Surgeon is promoted to Surgeon-Major on completion of twelve years' service from date of first commission.

7. In cases, however, of emergency, or when the good of the service renders such alteration desirable, it is competent for the Secretary of State for India, on the recommendation of the Viceroy and Governor-General of India in Council, to shorten the period of service above mentioned, in such manner as he shall deem fit and expedient.

8. All promotions from the rank of Surgeon-Major to that of Brigade Surgeon, from the rank of Brigade Surgeon to that of Deputy Surgeon-General, and from the rank of Deputy Surgeon-General to that of Surgeon-General, are given by selection for ability and merit.

9. On appointment as Honorary Physician or Honorary Surgeon to Her Majesty, an officer below the rank of Deputy Surgeon-General shall be promoted to that rank.

10. Time passed on half-pay will in no case be reckoned as service in calculating claims for promotion.

11. *Tenure of Office in Administrative Grades.*—The tenure of office of Surgeons-General and Deputy Surgeons-General is limited to five years.

12. Deputy Surgeons-General, if not disqualified by age, are eligible either for employment for a second tour of duty in the same grade, or for employment in the higher grade of Surgeon-General by promotion thereto.

13. Absence on leave in excess of six months on medical certificate, or of four months on private affairs, involves forfeiture of appointment.

14. *Pay and Allowances when in India.*—Officers who may hereafter be appointed to the Indian Medical Service will receive pay in India according to the following scale when not holding an appointment carrying higher pay:—

Rank.	Years' Service.	Pay and Allowances per Mensem.		
		R.	A.	P.
Brigade Surgeon and Surgeon-Major.	25	888	12	0
„ . .	20	852	3	7
„ . .	15	677	6	11
„ . .	12	640	14	6
Surgeon . . .	10	410	9	5
„	6	392	5	2
„	5	304	14	2
„	under 5	286	10	0

appointment they will only come into receipt of these allowances
of their arrival in India.

nthly salaries of officers holding the principal administrative
and substantive military charges of the Indian Medical Service
resent, the following consolidated salaries:—Surgeon-General,
700; Madras, Rs. 2500; Bombay, Rs. 2500; Deputy Surgeon-
ı Rs. 2250 to Rs. 1800; Brigade Surgeon or Surgeon-Major, of
service and upwards, in substantive charge of a Native regiment,
h Rs. 90 horse allowance in Cavalry regiments; Brigade Surgeon
Major in substantive charge of a Native regiment, Rs. 800, with
allowance in Cavalry regiments; Surgeon, above five years' full-
in substantive charge of a Native regiment, Rs. 600, with Rs. 60
nce in Cavalry regiments; Surgeon, under five years' full-pay
bstantive charge of a Native regiment, Rs. 450, with Rs. 60 horse
Cavalry regiments.

laries of other substantive medical appointments in the Civil and
artments are consolidated, and vary from Rs. 1800 to Rs. 400

ed officers of the Medical Service are also eligible for appoint-
Assay Department. The salaries of these appointments are from
. 2250 per mensem.

l officers are required to perform two years' regimental duty in
they can be considered eligible for civil employment.

dical officer, however employed, can receive any staff allowance
the pay laid down in para. 14, unless he has passed the examina-
ustani, known as the "Lower Standard." The passing of this
does not of itself bring any increase of pay to an Officer, unless
a substantive or officiating charge; but failure to pass disqualifies
ven when holding such substantive or officiating charge, from re-
ortion of the staff allowances of the appointment.

ns-General and Deputy Surgeons-General, on vacating office at
n of the five years' tour of duty, will be permitted to draw *in*
tively an unemployed salary of Rs. 1200 per mensem in the
Rs. 900 in the latter case, for a period of six months from the
vacating office, after which they will be placed while unemployed
ving scale of pay:—Surgeon-General, after thirty years' service
£2, 5s.; after twenty-five years' service on full-pay, £2, 5s.; after
' service on full-pay, or on promotion should this period of service
eted, £2; Deputy Surgeon-General, after thirty years' service on
14s.; after twenty-five years' service on full-pay, £1, 10s.; after
' service on full-pay, or on promotion should this period of service
leted, £1, 8s.

gh.—An officer will be eligible for one year's furlough on the
f five years' actual service in India, and for an additional year
bsequent five years' service.

on furlough under the above rule an officer will receive half the
of his office, but will not draw more than £1000 or less than £250

certificate of a Medical Board, an officer not entitled to furlough,
ved not less than two years in India, may receive it for any period
g two years.

rs of the Administrative Grades are entitled during their tenure of
to six months' leave of absence on sick certificate, or four months'
vate affairs.

rs and Rewards.—Officers of the Indian Medical Service are
the military distinction of the Order of the Bath, and for good
ions.

the most meritorious officers are named Honorary Physicians, and
y Surgeons to Her Majesty.

28. *Retiring Pensions and Half-Pay.*—Officers of the Indian Medical Service will be allowed to retire on the following scale of pension, on completion of the required periods of service :—After thirty years' service for pension, £700; after twenty-five years' service for pension, £500; after twenty years' service for pension, £365; after seventeen years' service for pension, £292.

29. Time of service for pension will reckon from date of arrival in India, and will include furlough taken under the rules referred to in par. 22. The period of residence at the Army Medical School will also reckon as service for the above pension, except in the cases of officers who have gone through the course at Netley as candidates for the British Army or Navy Medical Service.

30. A Surgeon-General, after five years' active employment in India in that grade, will be entitled to retire upon a pension of £350 per annum, in addition to that to which he may be entitled under the above scale.

31. A Deputy Surgeon-General will, after five years' active employment in India in that grade, be entitled to retire upon a pension of £250 per annum, in addition to the pension to which he may be entitled under the above scale.

32. In each of the above cases stated in paras. 29 and 30, six months' absence on medical certificate will be allowed to count towards actual service in those grades.

33. A Surgeon-General or Deputy Surgeon-General who has completed his term of service and has reverted to British pay, may reside in Europe, at the same time qualifying for higher pension.

34. With a view to maintain the efficiency of the service, all medical officers of the rank of Brigade Surgeon and Surgeon-Major shall be placed on the Retired List when they shall have attained the age of fifty-five years, and all Surgeons-General and Deputy Surgeons-General when they shall have attained the age of sixty years. In any special case, where it would appear to be for the good of the service that the officer should continue in employment, he may be so continued, subject in each case to the sanction of the Secretary of State for India in Council.

35. A medical officer retiring after a service of twenty years and upwards may, if recommended for the same by the Government of his Presidency, receive a step of honorary rank, but without any consequent increase of pay.

36. Medical officers not entitled to pension, but who, at the expiration of two years' leave of absence on medical certificate, are unfit to return to duty, will be placed on temporary or permanent half-pay, after examination by the Medical Board at the India Office. The half-pay granted in such a case will be the British rate of half-pay of the relative rank held by the officer :—Brigade Surgeon or Surgeon-Major of twenty years' service ranking with Lieutenant-Colonel, 11s. per day; Surgeon-Major, ranking with Major, 9s. 6d. per day; Surgeon, ranking with Captain, 7s. per day. Officers cannot retire *in India* on half-pay (No. 54, 28th February 1865).

37. The period passed on half-pay will in no case be reckoned as service in calculating claims for promotion or to pension on retirement.

38. *Wound Pensions.*—Medical officers are entitled to the same allowances granted to Her Majesty's Indian Military Forces on account of wounds and injuries received in action as combatant officers holding the same relative rank.

39. *Family Pensions.*—The claims to pension of widows and families of medical officers shall be treated under the provisions of such Royal Warrant regulating the grant of pensions to the widows and families of British officers as may be in force at the time being. (The Royal Warrant of 11th March 1882 is the one now in force.)

40. The widows and families of medical officers are also entitled to pensions from the Indian Service Family Pension Fund, to which all Surgeons must, as a condition of their appointment, subscribe from the date of their arrival in India.

NAVY MEDICAL DEPARTMENT.

Admiralty, 44 Spring Gardens, London, S.W.

REGULATIONS FOR ENTRY OF CANDIDATES FOR COMMISSIONS IN THE MEDICAL DEPARTMENT OF THE ROYAL NAVY.

1. Every candidate for admission into the Medical Department of the Royal Navy must be not under 21 nor over 28 years of age on the day on which he presents himself for examination. He must produce an extract from the register of the date of his birth; or, in default, a declaration made before a magistrate, from one of his parents or other near relative, stating the date of birth. He must also produce a certificate of moral character, and a recommendation signed by a clergyman or magistrate to whom he has been for some years personally known, or by the president or senior professor of the college at which he was educated.

2. He must be registered, under the Medical Act in force at the time of his appointment, as possessing two diplomas or licenses recognised by the General Council, one to practise medicine and the other surgery in Great Britain and Ireland.

3. He must sign a declaration that he is a British subject, the son of parents of unmixed European blood; that he labours under no mental or constitutional disease or weakness, or any other imperfection or disability which may interfere with the most efficient discharge of the duties of a medical officer in any climate; and that he does not hold, and has never held, any commission or appointment in the public services.

He must also declare his readiness to engage for general service at home or abroad as required.

He must be free from organic or other disease, and his physical fitness will be determined by a board of medical officers, who are to certify that his vision comes up to the required standard, which will be ascertained by the use of Snellen's test types.

The certificates of registration, character, and age must accompany the declaration, which is to be filled up and returned as soon as possible, addressed as above.

4. Candidates will be examined in the following subjects:—Anatomy and Physiology; Surgery; Medicine, including Therapeutics and the Diseases of Women and Children; Chemistry and Pharmacy, and a practical knowledge of Drugs. (The examination in Medicine and Surgery will be in part practical, and will include operations on the dead body, the application of Surgical Apparatus, and the examination of Medical and Surgical patients at the bedside.)

The eligibility of each candidate will be determined by the result of the examinations in these subjects only.

Candidates who desire it will be examined in Comparative Anatomy, Zoology, Natural Philosophy, Physical Geography, and Botany, with special reference to Materia Medica, also in French and German; and their position on the list of successful competitors will be improved by the number of marks gained in Natural Science and Modern Languages.

5. Every candidate, immediately after passing this examination, will receive a Commission as a Surgeon in the Royal Navy, and will undergo a course of practical instruction in Naval Hygiene, etc., at Haslar Hospital.

The full and half-pay per day of Naval Medical Officers is in accordance with the following scale:—FULL-PAY: Surgeon—On entry, 11s. 6d.; after 4 years' full-pay service, 13s. 6d.; after 8 ditto, 15s. 6d. Staff Surgeon—On promotion, £1, 1s.; after 4 years' full-pay service in rank, £1, 4s. Fleet Surgeon—On promotion, £1, 7s.; after 4 years' full-pay service in rank, £1, 10s.; after 8 ditto, £1, 13s. Deputy Inspector General, £2, 2s. Inspector General, £2, 15s. On first appointment to the service, medical officers will receive full pay from date of appointment, but subject to the provisions of Art.

1255, clause 2, of the Queen's Regulations, 1879. HALF-PAY: Surgeon—Under 2 years' full-pay service, 6s.; after 2 years' full-pay service, 7s.; after 4 ditto, 8s.; after 6 ditto, 9s.; after 8 ditto, 10s.; after 10 ditto, 11s. Staff Surgeon—On promotion, 12s.; after two years' full-pay service in rank, 13s.; after 4 ditto, 14s.; after 6 ditto, 15s. Fleet Surgeon—On promotion, 17s.; after two years' full-pay service in rank, 18s.; after 4 ditto, 19s.; after 6 ditto, £1. Deputy Inspector General—On promotion, £1, 5s.; after 2 years' full-pay service in rank, £1, 7s.; after 4 ditto, £1, 9s. Inspector General, £1, 18s.

The following is a copy of the Papers set for the examination of Candidates for Her Majesty's Army, Indian, and Naval Services, August 1884:—

ANATOMY AND PHYSIOLOGY.

1. Describe the tibia, giving an account of the origin and insertion of the muscles arising from or inserted into it. Describe also the structure of the knee-joint.

2. Describe the abdominal aorta, giving an account of its relation to neighbouring parts. Enumerate its branches, and describe in detail the relation and distribution of those of the cœliac axis.

3. What are the sources of animal heat, and the nature of the mechanism by which it is regulated and distributed? Explain how it is that a mean temperature of the body is preserved under exposure to the influence of either extreme heat or extreme cold.

4. Describe the origin, distribution, anatomical relations, and functions of the spinal accessory nerve and its branches.

5. Describe the dissection by which you would expose the parotid gland. Give an account of its connexion and relation to the various neighbouring structures.

SURGERY.

1. What are the causes which give rise to extravasation of urine in the perinæal region? Describe the appearance of the parts in the various stages of extravasation; and the treatment; and the consequences of such an injury.

2. Describe the symptoms by which chronic inflammatory swelling of the testicle may be diagnosed from any other enlargement of that organ, and the treatment to be adopted for the relief of the first-mentioned condition.

3. Explain generally what is understood by the term "Tertiary Syphilis." What tissues does it most frequently affect; and what should be the treatment under its various conditions?

4. What are the constitutional and local causes, and general characteristics, of gangrene affecting any portion of the lower limb in old age, independent of any severe accident; and what should be the treatment, according to the various stages or conditions of the malady?

5. Describe the conditions known as "Caries" of bone. What bones are most commonly thus affected, and what serious complications may follow when it attacks certain bones? What are the best local and constitutional measures to be recommended under these various circumstances?

6. Describe the appearance and conditions of a knee-joint when the seat of acute synovitis; the treatment of such a case; and any unfavourable symptoms that may ensue when the acute state has subsided.

MEDICINE.

1. Explain the meaning of *vaccination*. Describe its purpose as first applied to the human race; and mention how, when, and by whom it came to be so employed. Explain what is meant by *primary vaccination*, and what by *secondary vaccination* or *re-vaccination;* and describe the regular phenomena

hich follow each of these operations; also describe the appearance of a perect vaccine pustule, and of the scar which is typical of a genuine vaccination, nd how its characteristic appearance is brought about. Explain, further, the *ationale* of "*arm to arm*" vaccination, and mention the age at which primary accination is to be done; and the means necessary to secure its success. Lastly, explain how "*sufficiency in amount*" of vaccination is to be judged of; and how the operation is performed.

2. What are the indications afforded by the ophthalmoscope in diseases of the brain, of its membranes, and of the cranial bones?

3. What are the diseases which may be mistaken for *enteric fever*, in the absence of the rose rash? and discuss the points in each case by which your diagnosis would be arrived at.

4. Describe the causation, morbid anatomy, histology, and treatment of *rickets*.

5. Describe the causation, phenomena, and morbid anatomy of the various forms of febrile disease usually described as *puerperal fever*. What are the indications for their treatment, prophylactic and curative; and on what grounds would you base a prognosis?

6. Name the officinal preparations of *ergot*, and the doses of each. What are the chemical principles obtained from *ergot?* and in which of them resides the activity of the drug? Describe the physiological action, the remedial uses, and the mode of administration of the crude drug, and of those of its constituents which have been used.

ZOOLOGY, BOTANY, AND PHYSICS.

ZOOLOGY.

1. What are the classes of the *Vertebrata?* Arrange these classes into two roups, in accordance with the presence or absence of an amnion during levelopment.

2. Describe the stomach of a sheep, and enumerate the more important points of structure which are usually associated with this form of stomach in such animals as possess it.

3. In what order of birds are the wings so imperfectly developed as to be ncapable of subserving the purpose of flight? Point out the leading features in the geographical distribution of this order.

4. Select any typical example you please of the *Cœlenterata*, and describe its structure.

5. Enumerate the principal points of difference as regards mouth-organs and wings between the following order of insects—*Coleoptera*, *Hymenoptera*, *Lepidoptera*. Give an example of each of these orders.

BOTANY.

6. What are the essential, and what the non-essential, parts of a flower? Adduce one or more instances of flowers in which the non-essential parts are absent.

7. What is the difference between the fibre of *cotton* and that of *flax?* From what part of the plants yielding them is each obtained?

8. Define the natural order *Ranunculaceæ?* Adduce from the pharmacopœia one or more examples of plants referable to this order.

9. What is *cyclosis?* Give some examples of this phenomenon.

10. What is *chlorophyll?* Mention the conditions necessary for its development.

PHYSICS.

11. What is meant by the "law of sines" as applicable to the refraction of ight?

12. What is meant by the "dark lines" on the solar spectrum? How may hese lines be accounted for?

13. State the evidence from which it has been inferred that various parts of the earth's surface are slowly undergoing changes of level.
14. What is a "river delta"? Mention some of the principal river deltas of the world.
15. Explain the formation of "dew."

Part Fourth.

PERISCOPE.

OCCASIONAL PERISCOPE OF DERMATOLOGY.

By W. Allan Jamieson, M.D., F.R.C.P., Extra Physician for Diseases of the Skin, Edinburgh Royal Infirmary; Lecturer on Diseases of the Skin, Edinburgh School of Medicine.

Neuritis in Association with Herpes Zoster.—Dubler of Wohlen has had the opportunity of making two autopsies in the cases of two old women, aged 77 and 71, who had suffered from zoster of the thoracic region, accompanied and followed by severe neuralgic pains. The zoster appeared in the one case a year and a half, in the other three months, previous to death. In the first the essential anatomical alterations, as far as the zoster was concerned, consisted in an advancing neuritis of the intercostal nerves, caused by a caseous periostitis of the ribs. The neuritis extended even to the finest twigs in the skin and muscles, while the spinal ganglia were, on the contrary, unaffected. The second presented an example of spontaneous idiopathic zoster, directly occasioned by a neuritis of two intercostal nerves. Only one of two associated ganglia presented any pathological change, but here also the neuritis extended to the finest peripheral ramifications. It would appear that in zoster, though the disease in the nerve may start from the spinal ganglia in the first instance, yet the inflammation of the nerve must include the nerves themselves and their skin branches. The motor nerve filaments participate also in the neuritis, and this explains why paralyses may occur in the course of zoster. Another remarkable fact brought out by Dubler is that the neuritic process is of a special intensity, as shown by the considerable alterations in the nervous system discoverable so long after the occurrence of the zoster. The chief cause of the production of herpes zoster seems to be a neuritis which descends even to the terminations of the nerves in the skin, and thus affects the rete Malpighi. In every neuritis, then, if the last indication is fulfilled, we may find the starting point of a zoster. In considering the causes of zoster, therefore, it is necessary to bear in mind those which may lead to a neuritis. These are—1. Traumatic origins, from stab, blow, shot, compression, etc. 2. Progressive form, caused by an advance of the inflammation from neighbouring bones or soft parts to the nerves. 3. Toxic causes.—Thus zoster

known to arise after poisoning by carbonic oxide gas, and
oderate use of arsenic as a medicine internally has been
as a cause of the disease. 4. Infectious-miasmatic
Cases of this kind have hitherto not been with certainty
d. Proust and Ballet have, however, several times seen
the region of the left ulnar nerve in persons affected with
a disease which these writers think must be regarded as
fectious nature. The occurrence of cases of zoster in
at the same time must also be borne in mind in relation
5. Rheumatic causes.—Chills have frequently been made
le for the appearance of zoster, this form of neuritis is
analogous to the rheumatic form of facial paralysis, a
instead of a motor nerve being implicated. This, as
ie previous group, needs further clinical and anatomical
ion. 6. Lastly, there remains for the present the largest
iere a cause is not discoverable—the spontaneous cases.
onnexion the observation of a case is of interest which
the hereditary nature of the disease. Here the grand-
l uncle of the patient had both had zoster. In conclusion,
atomical investigations must take into consideration
e spinal ganglia, before everything, the nerves in their
kness and their entire peripheral distribution, and also
n other forms of neuritis, the inflammation in herpes
y affect motor as well as sensitive nerves.—*Virchow's*
ay 1884.

OFORM PURPURA.—Morel-Lavallée has related three cases
den development of purpura during chloroform inhala-
h were observed during a period of three months at the
Hospital. In all three cases there was produced, at one
the commencement of the administration and in the space
two minutes, a discrete eruption of purpuric macules,
mean diameter of three or four millimetres. The blood
cted with sufficient force into some of the spots as to
them immediately into hæmorrhagic bullæ. The
id not specially affect the hair follicles; in the three cases
attacked the same region—the middle part of the body,
y the anterior aspect of the thorax. In discussing the
thinks this should be classed among the neurotic
and should be associated with those which are produced
ult of a violent emotion, and that the essential cause is an
s of nervous origin. He does not think it can be classed
e of medicinal origin, as those from mercury, ergot,
., as those need time to penetrate the system.—*Annales de*
gie et de Syphiligraphie, February 1884.

MENT OF LUPUS VULGARIS BY THE LOCAL APPLICATION
UROUS ACID.—Dr Collier relates some cases of ulcerating
ich healed well under this agent. He employs it in

several combinations, but prefers a solution of the anhydrous acid (which may be procured at all druggists in the form of a concentrated alcoholic solution) in castor oil. One drachm of this to two ounces of castor oil is the strength employed to dress the ulcers.—*Medical Times*, 26th April 1884.

TOXICODERMA AMONG FEATHER WORKERS.—Molènes and Lermoyez describe a form of eruption which they have observed among those who have been working with feathers dyed the colour of old gold. The history showed that the eruption appeared some days after the introduction into the common workroom of cheap new feathers of the shade of old gold, and differing a little from those which until then the operatives had handled with impunity. "Traced to its source, the original colouring material of German manufacture was procured, which had been recently substituted, on the score of economy, for harmless French substances which cost more." This substance, when examined in the laboratory of M. Gerard, was recognised as a mixture of various aniline orange hues, still incompletely separated from irritating empyreumatic products. The affection began on the hands after a period of incubation which could not be exactly determined, but which bore some relation to the susceptibility of the skins affected. The first itching in the hands was experienced in from ten to fifteen days after commencing to handle the poisonous feathers. The disease might be considered to present three stages. In the first of these it bore some resemblance to itch and to dysidrosis. There were fine and transparent vesicles situated between the fingers, but they were hard also situated on the sides of the fingers. There was rather smarting than itchiness, and more during the hours of work than at night. There were no burrows nor acari, nor the polymorphism seen in scabies. The appearances at the commencement more closely resembled the dysidrosis of Fox, but the yellow staining of the cuticle directed attention to the cause. During the second stage there were large purulent blisters, irregularly ulcerated surfaces, and smarting pain, which might have been supposed due to a burn of the second degree, had there been no history available. In the third stage there was some likeness to eczema, but there were no crusts nor marked oozing, and though a recurrence took place in consequence of the irritation occasioned to the hands by ordinary house work, the resulting groups of vesicles were hard, large, and deeply seated, such as, in fact, are not met with in eczema. Six cases were seen; the details of four of these are given.—*Annales de Dermatologie et de Syphiligraphie*, April 1884.

TREATMENT OF SEBORRHŒA SICCA.—Besnier and Doyon, in criticising the treatment of this affection recommended by Unna, thus formulate their own. 1. In men and children of both sexes the hair should be cut very short and kept so for a long time; this done, any procedure which one wishes is to be adopted to free the scalp from its fatty envelope. In a great many cases this alone is enough. The washing should be done in the morning with warm water and soap aided by a sponge. "As regards pomade, we habitually use one of naphthol, 5 per cent." 2. In women, where the hair must remain long, twice a week friction is made at night with the naphtholated oil, and next morning the head is cleansed thoroughly with a warm decoction of the saponaceous quillayia bark. The hair is then rinsed with plain warm water, and dried with a warm napkin.—*Annales de Dermatologie*, April 1884.

FAT SALVES AND COOLING OINTMENTS.—Unna, with that versatility of genius which distinguishes him, has turned his attention to a point which has not previously attracted notice,—the reason, namely, why some ointments, when smeared over the skin, cause it to feel warmer than before, while others produce a cooling effect. He found that in all the latter there was combined with the fatty ingredient a quantity of water. The ung. plumbi subacetatis and cold cream are familiar examples of cooling ointments. He explains the reason of this refrigerant action as follows:—Our skins are so constituted as to require lubrication. This is constantly being done by the secretion of the sweat glands, and under certain circumstances by the sebaceous glands also. But the cutaneous lubricant consists only partially of fatty matter; it contains, in addition to water, also fatty acids and soaps; without this admixture the watery exhalation from the skin would experience obstruction, and owing to this obstruction the temperature of the skin, which normally suffers a continual and appreciable diminution by evaporation, would reach an unnatural height, and one inconsistent with health. Inunction with fat is used to conserve the body heat. Under pathological conditions dry, anæmic, and reactionless skins bear oily ointments well, while hyperæmic states are more suited for the linimentum calcis and cooling ointments. The presence of water in these opposes no obstruction to evaporation of water from the skin, and their own evaporation replaces that natural to the skin. Unna has made a collection of all the various formulæ for cooling ointments, and has tabulated and compared these, and then has, with the assistance of Dr Mielck, compounded and experimented on them. He finds that the best formula for cold cream, or for a cooling ointment, as regards consistence, refrigerating effect, etc., is as follows:—

℞ Aq. rosarum,
Ol. amygdal, . āā 10·0
Ceræ albæ,
Cetacci, . . āā 1·0

—*Monatshefte für Praktische Dermatologie*, June 1884.

PERISCOPE OF OTOLOGY.

By Dr. [illegible], Senior Surgeon to the Eye, Ear, and Throat [illegible] Street; Lecturer on Diseases of the Ear, Edinburgh School of Medicine.

Morbid Changes in the Labyrinth in a case of Acquired Deaf-mutism. By Moos and Steinbrügge (*Archives of Otology*, Nos. 3 and 4, 1883; *Annales des Maladies de l'Oreille, etc.*, p. 60, tome x. No. 1.—Girl twelve years of age; deafness acquired in fourth year, with the symptoms of encephalitis. She retained, to a certain extent, the power of hearing spoken words, and her intellectual faculties had remained intact. Her last illness, which lasted two months, was ushered in by an epileptic fit, which was speedily followed by paralysis of the right side. The petrous bones were large relatively to the age of the subject; there was no other important alteration in the external or middle ear. The tensor tympani of the right side was very small, but its fibres were normal. The auditory nerves were of firm consistence and normal structure. The vestibule, the semicircular canals, and the cochlea were normal on the right side; on the left they presented the following alterations:—In the connective tissue there were many colloid globules and molecular detritus, and the perilymphatic spaces of the semicircular canals were filled with the latter. The calibre of the membranous canals and the nuclei of their endothelium were well preserved. Nervous region normal. Vessels well filled. The principal alterations observed in the cochlea were above all the presence of a bony tissue of new formation which sprang from the two scalæ. It is interrupted in the two convoluted spaces by a network of connective tissue containing in its spaces rounded cells. The greater part of the calibre of the scala vestibuli is occupied by this newly formed osseous tissue, by its anastomoses of irregular cavities filled up with connective tissue and cellular elements. The spiral ligament of the second convolution presents cellular infiltrations. A similar alteration is noticed in the scala of the second and third convolutions. The organ of Corti could not be found, nor the membrana tectoria, but that perhaps arose from the bones having been softened in chromic acid. The following conclusions have been come to,—that the child in his fourth year had been attacked by an inflammation of the whole labyrinth. In the perilymphatic spaces it produced exudations in which the elements underwent more slowly a fatty granular degeneration. In the cochlea there was proliferation of the connective tissue and formation of bony tissue. The cavity of this organ was partly obliterated, and the spiral membranous lamina became rigid. The complete absence of nerves in the first turn is equally a consequence of the inflammation, because the rigidity of the spiral membrane sufficed to abolish the function of these nerves. The preservation of the internal muscles of the ear and of the auditory nerve is without arkable fact, but is in harmony with similar conditions been observed in other deaf-mutes.

UINEOUS MARRIAGES IN RELATION TO DEAF-MUTISM.—ameron, president of the subsection of State Medicine of ny of Medicine in Ireland, read a paper in which he e practices and prejudices in respect of consanguineous mongst ancient and modern nations, civilized, barbarous, . He next reviewed and criticised the memoirs on the he effects produced by the marriage of cousins. On the evidence seemed to show that the effects were somewhat The statistics in reference to mutes published in the s *Reports* for 1881, and the previous decennial reports, y examined by the author. It appears that in Ireland, ere were 5136 mutes, of whom 135 were the children of s. The author endeavoured to ascertain the proportion of ion who were children of first cousins. He ascertained gst nearly 8000 persons, the proportion was only 0·57 r less than one-fourth of the rate amongst deaf-mutes. tistics were in great part collected amongst Protestants, believed that there was not in all Ireland one person in d the offspring of first cousins, as marriage between such s very rare amongst Catholics, who formed three-fourths ulation of Ireland. The general conclusion arrived at onsanguineous marriages were a cause of deaf-mutism. rick observed that in his own experience he found almost of (*congenital?*) deaf-mutism to be the result of the inter- f near relatives. To take an example, he found not only ild a deaf-mute and another insane, but that the whole ook of degeneration of the nervous power. They entered narriage and never prospered in society. Scrofula, deaf- sanity, and other characteristics exhibiting weakness of muscular power, resulted from those marriages. Dr ought it was well known to all persons who tried to class animals, that close in-and-in breeding resulted in deterioration of the species, and also that animals when nselves did not select their nearest relatives for sexual . Even that much maligned animal the female dog ariably select not a dog of her own peculiar breed, but different race altogether, both with regard to size and r Wright concurred as to the damage ensuing from the f near relatives, and referred to Darwin's experiment on d to the difficulty of keeping a pure breed of poultry as by the fate of the bantams brought from the palace of l by the destruction of another favourite breed of fowls, crested Polish. He did not believe that female animals e male; the converse, he thought, was the rule. Dr eplied, pointing out that his statistics were necessarily and restricted. It would be indispensable to ascertain how many of the whole population were the children of first cousins before drawing a definite conclusion.—*British Medical Journal*, 12th May 1883, p. 913.

PERISCOPE OF LARYNGOLOGY AND RHINOLOGY.

By G. HUNTER MACKENZIE, M.D., and J. MAXWELL ROSS, M.A., M.B., F.R.C.S.E.

DISTORTION AND CICATRICIAL STENOSIS OF THE TRACHEA, FOLLOWING THE PROLONGED USE OF A TRACHEOTOMY TUBE.—Dr G. M. Lefferts reports a case of the above occurring in a medical student, æt. 25, who, at the age of 3, was tracheotomized for croup, and had worn the tube for eight years. The symptoms were a peculiar whistling noise during inspiration, especially after exertion, and occasional difficulty in clearing the throat of accumulated mucus. A laryngoscopic examination showed a stenosis of the upper trachea to the extent of at least two-thirds of its normal lumen. This condition was due to a marked depression inwards of the anterior arch of the cricoid cartilage, to a lateral prolapse of the tracheal wall, and lastly, to several strong cicatricial bands running in an antero-posterior direction, from and below the convexity of the depressed portion of the cricoid cartilage to the posterior tracheal wall.—*New York Medical Record*, 26th April 1884. [This case is one of which there are very few examples in the records of laryngology. It corresponds in several features with one published by Mr Maxwell Ross in this Journal for March 1883. The lesion occurred in a young woman who had undergone tracheotomy, when an infant one year old, for relief from the presence of a foreign body. The tube was only worn a fortnight. The laryngoscope revealed, in addition to an undeveloped state of the vocal cords, a stenosis of the trachea in the form of what appeared to be a shelving projection of mucous membrane (cicatricial band?) at the lowerend of the tracheal cicatrix stretching more than half-way across the lumen of the trachea, very much after the fashion of a hymen, and leaving only a triangular aperture for breathing].

THE LOCAL TREATMENT OF CHRONIC NASAL CATARRH.—Dr G. M. Lefferts, in a lecture on this subject published in the *Philadelphia Medical News* for 26th April and 3rd May, recommends that the local treatment should be twofold:—(1.) Cleanliness; (2.) The direct application of some medicated fluid or powder to the nasal mucous membrane. In simple chronic rhinitis and in a large proportion of cases of early hypertrophic rhinitis, this cleansing may be done sufficiently by the patient himself using his handkerchief unaided by any artificial form of apparatus. If an apparatus be required it should be one arranged to throw in a very coarse spray by the anterior nares. The nasal douche is inefficient, as it does not thoroughly wash or cleanse the nasal cavities even when carefully used. In severer cases of hypertrophic rhinitis it

essary to use a post-nasal syringe. The cleansing
ich may be used by means of these instruments are very
Lefferts, among others, recommends one made up as
dæ bicarbonatis and sodæ biboratis āā ʒss., " Listerine "
æ, ad. ℥iv. This "Listerine," which is also recom-
e treatment of similar cases by Dr Carl Seiler, is a
containing the essential antiseptic constituents of
lyptus, baptisia, gaultheria, and mentha arvensis in
Each fluid drachm also contains two grains of benzo-
The cleansing having been effected, the medicated
re to be applied. Personally, Dr Lefferts prefers that
e done in the form of sprays by the posterior nares if
palate being pulled forward by a hook to allow of the
ation. The spray is best applied by means of a
ir apparatus, but in default of this, a hard rubber
ay be used to make the application by the anterior
inci iodidi, grs. v.–℥i.; 2. Zinci sulphocarbolatis,
. Zinci sulphatis, gr. v.–℥i.; 4. Ferri et ammoniæ
. v.–℥i.; 5. Ferri perchloridi, gr. v.–℥i.; 6. Acidi
v.–xx.–℥i.; 7. Potassæ chloratis, gr. xx.–℥i., are the
st commonly used, given in the order of their prefer-
y of these formulæ " Listerine " may be substituted, in
water, in the proportion of one part of the former to
latter. In most cases of hypertrophic rhinitis it will
ommence at once with the following:—Iodini cryst.,
sæ iodidi, gr. x.; zinci iodidi, gr. xx.; zinci sulpho-
r. xx.; "Listerine," ℥i.; aquæ, ad. ℥iv. If any of
irritation their strength should be reduced. If the
rhinitis be too far advanced, and a firmly-organized,
sue exists in a large degree, it may be necessary to use
tive agent, such as nitric, acetic, or chromic acid, or
cautery. Atrophic or fetid rhinitis Dr Lefferts regards
r powers of cure. The best we can promise the patient
te his symptoms. The indications are twofold—to
disinfect, and to keep clean and disinfected, the nasal
ll decomposing crusts and secretions; and, second, to
e atrophied mucous membrane, with a view to the
of function and character of secretion in the muci-
les and serous glands. Whether this latter can be
l Dr Lefferts is doubtful. The use of such drugs as
galanga, carbolic acid, creasote, salicylic acid, iodine,
of potassium in solution, is called for. They should
y means of an atomizer. Dr Seiler advises a powder
silver and starch, or a weak solution of sulphate of
monia.

L WEB OF THE VOCAL BANDS.—A case of this nature
in the *N. Y. Med. Journ.* for 14th June 1884, by Dr

T. A. De Blois of Boston. It occurred in a girl æt. 20. By laryngoscopic examination it was seen that the anterior half of each vocal band was spanned across by a white and almost transparent web, perfectly symmetrical, elastic, and expanding and contracting perfectly in unison with the motion of the vocal bands. After many failures it was torn across by means of a Mackenzie's forceps, introduced closed and suddenly opened in the larynx. The result was successful, and it is stated that about a month later the singing voice had gained three notes above and four below what she was able to sing before operation.

CHANCRE OF THE TONSIL.—Dr Charles H. Knight records two cases from the late Dr Bumstead's notes of this affection. The first occurred on the left tonsil of a man, æt. 30, sixteen days after "abnormal coitus." The glands on the left side of the jaw became engorged in three weeks. Other constitutional symptoms followed later on. The second case was that of a married lady, who showed first an ulceration and hypertrophy of the tonsil, the nature of which was not suspected till an eruption of macules and papules on neck and chest, with enlargement of the cervical glands, appeared. Improvement followed the use of specific remedies. She was believed to have derived the chancre from her nephew, a boy of sixteen, who was in the habit of frequenting her room, and making use of her tooth powder. It was known that he was at that time suffering from buccal mucous patches and other syphilitic symptoms.—*N. Y. Med. Jour.*, 14th June 1884.

PERISCOPE OF SYPHILOLOGY.

By FRANCIS CADELL, F.R.C.S. ED.

PERVERTED SEXUAL INSTINCT.—*The Medical Record*, July 19, 1884, has a leading article on this subject. They believe it to be demonstrated that conditions once considered criminal are really pathological, and come within the province of the physician. They append the conclusions which Krafft-Ebing has reached upon this subject. He says: "1. There exists a congenital absence of sexual feeling toward the opposite sex, at times even disgust of sexual intercourse. 2. This defect occurs in a physically differentiated sexual type, and with a normal development of sexual organs. 3. Absence of psychical qualities corresponding to the anatomical sexual type, but the feelings, thoughts, and actions of a perverted sexual instinct. 4. Abnormally early appearance of sexual desire. 5. Painful consciousness of the perverted sexual desire. 6. Sexual desire toward the same sex. 7. The sexual desire remains purely platonic or finds gratification in mutual onanism, or in feeling of the object of the affections; often there is self-pollution, but for the want of something better. 8. There are mptoms of a morbid excitability of the sexual desires, together th an irritable weakness of the nervous symptoms, so that nsuous feelings, magnetic sensations, and even pollutions occur simply touching the object of the affections. 9. The perverse xual impulse is abnormally intense and rules all thought and nsation. The love of such persons is excessive, even to adoration, id is often followed by sorrow, melancholy, and jealousy. 10. eople afflicted with this abnormity frequently possess an instinc- ve power to recognise one another." In this last conclusion the ithor cannot agree. The power of mutual recognition is not stinctive but acquired.

REMARKS ON GONORRHŒA.—Two opinions exist as to the nature gonorrhœa, one party regarding it as the result of a specific ison, and calling it specific urethritis, the other regarding it as a cal irritation and producible by a variety of causes. It must be mitted that the disease has several features which are not usually sociated with diseases known to be specific. Thus all such seases have a period of incubation, gonorrhœa has none. Specific seases protect against a second attack, gonorrhœa does not. ecific diseases generally have a special pathology, but we see thing of this kind in the disease under consideration. Specific seases mostly run a definite and self-limited course, gonorrhœa es not. The only argument for the specific nature of the disease at has much force is the general immunity of married men who nfine themselves to licit indulgence with wives who may be affected ith leucorrhœal discharges. Ricord was of opinion that the im- unity was due to a sort of acclimation. This view, however, will t explain the immunity of newly married men. The real explan- ion is, probably, that the vaginal discharge in most cases of leu- rrhœa is not purulent. It is the pus that makes it active. The thor divides gonorrhœa into three varieties,—the acute, sub-acute, d irritative or abortive variety. Out of thirty cases of the disease rhaps four or five will never progress beyond the premonitory mptoms. In fact, in most cases, unless there is marked pain, it best to wait twenty-four hours. If the case does not develop it one of the abortive variety. In the discussion which followed reading of this paper, Dr Shakespeare said,—I understood Dr hite to say that any purulent vaginal discharge may be a cause gonorrhœa in men. If this be true, I am unable to see how rried men who confine their embraces to their wives so univer- ly escape, although ulceration of the os uteri and a consequent rulent vaginal discharge are common in married women (Dr J. lliam White).—*The Polyclinic*, July 15, 1884.

HE CHANCROID AND ITS TREATMENT.—There is a communication this subject in *The Polyclinic*, July 15, 1884, by Dr J. Henry C. nes. After describing the clinical features of this lesion, the hor gives the following details of the treatment he has found most effectual. He determined, on account of the severe pain caused by cauterization, to omit these agents provided no evil effect arose from the omission. Twelve cases were treated in this way, and in none was it found necessary to use caustics, in none did any complication arise during treatment, and in all a favourable termination was the result. It could scarcely have been a coincidence, but it is the fact, that in not a single instance where the cauterization was omitted was the lesion complicated by an adenitis. While, on the contrary, in four of the five cases which had been cauterized previously to coming under his observation, there was developed, or there existed at the time they presented themselves for treatment, a suppurating adenitis or periadenitis. Auto-inoculation was also prevented by this treatment. The method adopted was as follows:—"The discharge from the lesion is, as far as possible, to be prevented from collecting upon and around the sore; this may be done by frequent washings with water. The surface of the sore is kept dusted with iodoform, and is covered with a pledget of absorbent cotton." The advantage of the iodoform treatment was found in the greater rapidity with which the process of healing progressed. [For several years we have employed the iodoform treatment of chancroid with the best results, and have only required to use caustics on very rare occasions.]

MEDICAL PERISCOPE.

By Francis Troup, M.D.

Infective Endocarditis.—Barth relates a case in an alcoholic man who, thirteen years ago, had rheumatic pains, but had remained well till now. He had been ill about eight days, and now had a temperature of 104°, and pulse of 90. Typhoid symptoms were marked; there was right iliac gurgling, abundant ochrey diarrhœa, but no rose spots or tympanites. There was a soft diastolic aortic murmur and some dulness, and a few crepitant râles at bases of both lungs. There was somnolence with sub-delirium. The urine was very albuminous. The intensity of the typhoid symptoms, of the diarrhœa and the possibility of an ancient cardiac affection in an alcoholic, with rheumatic antecedents, caused, at first, some hesitation in the diagnosis. Then patient began to complain of his wrists and arms, had profuse sweatings, slight shiverings, manifest fluctuation in elbows and wrists, which were swollen and red. The skin of forearms now showed red spots, scattered, in size from a grain of rice to that of a pea, and slightly raised above the surface. These spots were not ecchymotic, and gave the feel when palpated between two fingers of nodosities set in the skin; numerous on the forearms, about twenty only were scattered over the anterior aspect of the trunk, abdomen, and top of the thighs. Nothing new was found in heart or lungs, urine still very albuminous, but no œdema of limbs or any icteric tint of conjunctiva; diarrhœa severe. The patient's delirium had now the character of that of drinkers, dyspnœa became extreme, and collapse and death ensued. The autopsy showed a hypertrophied heart and sound valves save at the aortic orifice. On the under surface of one of the sigmoid valves there was a reddish concretion the size of a fifty centime piece, and from five to six millimetres in thickness; it was soft and tomentose, and adherent to the valve, which it had perforated in one or two points; water easily washed it away and revealed a sort of uneven, villous, jagged ulceration. Around this plaque the surface of the valvule was slightly injected, but healthy; nevertheless, its free border, as well as that of the other two sigmoids, was somewhat thickened and sclerous, but not calcified. Aorta, of normal calibre, was slightly atheromatous in patches. All the viscera presented embolic foci more or less voluminous. In the lungs were two or three conoidal infarcts occupying the inferior borders, and a very large number of small centres of lobular pneumonia, with a nucleus of suppuration the size of hemp seed in each. The visceral and parietal pleuræ were marbled with numerous ecchymotic spots. Liver and spleen contained similar suppurative foci. The kidneys, in their cortical substance, were riddled with infarcts, the larger affecting a conoidal form, the smaller appearing as miliary abscesses. The intestines, great and small, in the zone opposite the mesentery had similar central points of suppuration with peripheric congestion. The cranial meninges were injected, the pia-mater œdematous in the upper regions; and careful examination of the course of its vessels discovered here and there purulent tracks which appeared to occupy the lymphatic sheaths. The brain presented numerous foci of softening, very small, very circumscribed, some of them forming veritable miliary abscesses. The articulations were no longer red or tumefied, and contained no pus. Comment in this case is scarcely necessary; an infective endocarditis, which is developed apparently spontaneously in an alcoholic and rheumatic subject, which on ground thus prepared runs its course so rapidly, sends into the circulatory torrent showers of septic embolisms, and kills the patient even before symptoms of visceral infarctions have time to develop; this is rare indeed, but deviates in nothing from classic data. Two points deserve notice: first, the eruption appearing twenty-four hours before death and simulating a rheumatismal papular erythema; second, the abundance and malignity of the embolic foci. The disproportion between the remote lesions and their focus of origin, the rapidity of the suppurative process around the embola, and the *marche foudroyante* of the events, prove that the particles launched into the arterial system were of a specific infective nature. The lesions in all the organs presented a striking analogy, and were probably formed about the same time; they were of recent date, for the miliary abscesses, although very close to each other, remained perfectly distinct. The erythematous papules developed so suddenly were doubtless due to cutaneous embolisms, the same phenomenon which produced them in the arterial territories of the viscera doing the same in the peripheral vessels.—*La France Médicale*, No. 30, 1884.

THERAPEUTICAL APPLICATION OF CAFFEIN PREPARATIONS.—Professor Franz Riegel for more than a year has been experimenting in his clinique with caffein; and as its proper salts are little stable, easily decompose in solution and in air, he used the double salts of caffein in combination with sodic benzoate, cinnamate, and salicylate. Those salts are very soluble, and thus can be used subcutaneously. As result of his observations, he believes he can lay down the following propositions:—1. Caffein regulates the heart in the same way as digitalis. 2. In proper dose and form it increases the power of the heart, slows its action, and increases the arterial blood pressure. 3. It speedily occasions a considerable increase of the urinary secretion. 4. The indications for the exhibition of caffein preparations coincide in general with those for digitalis. 5. It succeeds best when given in small frequently repeated doses. 6. It operates much more rapidly than digitalis, and has no cumulative effects. 7. Even in cases where digitalis has failed, caffein is still indicated, and may have a favourable effect. 8. Narcotics, and particularly morphia, should not be given simultaneously. 9. Caffein, especially its easily soluble double salts, natrobenzoate, natrosalicylate, and natrocinnamylicate, is generally well borne, often better than digitalis.—*Berl. Klin. Wochenschrift*, No. 19, 1884.

THE ACTION OF "ANTIPYRIN."—This synthetic alkaloid, a chinoline derivative, described by Dr Knorr of Erlangen, has got its name from its antipyretic effects. Guttmann has tested its operation in 27 cases where fever was high, making in all 57 experiments, with the following results:—Antipyrin in doses of 4 to 6 grammes, most conveniently taken in two or three hourly repeated doses of 2 grammes each, in watery solution or enveloped in wafer, has a certain and decided antifebrile action, lasting five hours at least, often longer. The course of the temperature-reduction under the influence of antipyrin, in such dosage, is usually the following:—The fever temperature sinks continuously and gradually, half a degree within an hour after the first dose, reaching its maximum descent within three or four hours. This maximum fall amounts to 1·5, often to 2·0 or 3·0 degrees, of Celsius = 2·7 to 5·4 Fahrenheit. The duration of this temperature-reduction, that is, the length of time between the maximal temperature-fall and the maximal temperature-elevation again reached, varied considerably in the several trials,—at the least it lasted five to six hours, but often twelve or even eighteen. This proportionately long continuance of the antipyrin influence comes to pass in this way, that its action is only gradually exhausted, that the temperature consequently rises only in a gradual manner after it has remained perhaps an hour or two at its lowest level. The afore-mentioned dosage of antipyrin has been found the most effective to attain its strong and enduring action. But a similar action may be arrived at by one large dose of, say 4 grammes, or smaller doses of 1 gramme, given hourly, for at least five times. Half-gramme doses even repeated hourly for six times are of little avail, and still smaller doses are absolutely useless. Contemporaneously with the sinking of the temperature the frequency of the pulse subsides. If the fall of temperature is large, there is often heavy perspiration. Disagreeable collateral effects were not observed; sometimes vomiting. In most cases the remedy was well borne, even by patients who took 4 grammes at once, or 9·5 grammes within the twenty-four hours; and also by children taking repeated ½ and 1 gramme doses. The gradual rise of temperature after the antipyrin was losing its effect, always took place without shivering. In this it has a decided advantage over kairin. Its action seems altogether analogous to that of quinine, but a double dose is necessary; and it can only compete with the latter because its price is considerably lower. The temperatures were taken mostly in the rectum seldom in the axilla; hourly during the day, and every second hour during the night.—*Ibid.*, No. 20, 1884.

Part Fifth.

MEDICAL NEWS.

THE first number of the "Proceedings of the Society for the Study and Cure of Inebriety" has been sent us. It contains three valuable and important papers by Dr Norman Kerr, the president, Dr W. B. Carpenter, and Dr Axel Gustafson. There is also a report of a discussion which followed the reading of these papers, and which was adjourned and resumed to permit all who wished to take part in it. The following, among others, spoke—Dr Drysdale, Mr A. Oakey Hall, barrister and ex-mayor of New York, Mr Jabez Hogg, Dr H. Rayner of Hanwell Asylum, Dr George Harley, F.R.S., Surgeon-Major G. K. Poole, M.D., and Mr Holthouse. At the close of the meeting, on the motion of Mr Hogg, seconded by Dr Rayner, it was resolved:—"That this meeting, while recognising in the success of the experiment at the Dalrymple Home, proof of the value of the Habitual Drunkards Act, regrets its temporary and defective character, and urges the Legislature to pass a permanent measure dispensing with the attendance of the applicant for admission to a retreat before two magistrates, giving magistrates power of committal in certain cases, and empowering guardians to detain pauper habitual drunkards in workhouses or in homes for inebriates for a time, for treatment and cure; this resolution to be forwarded to the press, and to the Prime Minister and Secretary of State."

THE CRIEFF MINERAL WELL COMPANY.—Crieff is so well known as an excellent health-resort, on which Nature has showered her gifts of beautiful scenery and bracing air with a bountiful hand, that no words of ours can add to its celebrity. Year by year an ever-increasing number of invalids leave Strathearn with hearts full of thankfulness on restored health and recovered energy. An additional attraction to the district will now be found in the COWGASK WELL, whose water has just been brought before the notice of the public by the Mineral Well Company. It has long had in the neighbourhood a great reputation in the cure of disease, and we are glad that this effort is being made to render it more widely useful. It was, we believe, long ago analysed by Christison, and has recently been examined by Dittmar, whose results we give:—

	Grains per Gal.
Chloride of Sodium,	143·51
„ Potassium,	5·00
„ Calcium,	313·47
„ Magnesium,	16·26
Bromide of „	3·44
Sulphate of Lime,	34·48
„ Strontia,	3·51
Carbonate of Lime,	3·18
Silica and Alumina,	1·07
Total Solids,	523·92
Free Carbonic Acid,	2·97

Cowgask may be classed with the saline springs, but the presence of bromine adds largely to its value, and there can be no doubt of its efficacy in building up the frames and restoring the energies of those suffering from wasting diseases, especially scrofulous and tubercular. It is pleasant in its natural state, and in the artificially aërated form in which it is sent into the market it is very agreeable.

MR LENNOX BROWNE'S lecture on "Science and Singing," delivered before the Society for the Encouragement of the Fine Arts, is to be published immediately, in an amplified form, by Messrs Chappell, under whose auspices the same author's "Medical Hints" had such a wide circulation.

MR D. H. MENZIES, Glasgow, has just published a remarkably characteristic portrait, executed in crayon by Hanhart, of our veteran, young, and versatile Professor Douglas Maclagan. It is a good work of art and good likeness, though perhaps hardly giving the full brightness and cheerfulness of our friend and teacher.

Part First.

ORIGINAL COMMUNICATIONS.

I.—GOUTY NEUROSES OF THE HEART.

By J. MILNER FOTHERGILL, M.D. Edin.

THERE are no more troublesome forms of gout than gouty disturbances of the heart's action. All who have read Gairdner's treatise on Gout are familiar with an obscure class of disorders which, however, often produce much alarm.

Gairdner wrote, amidst other sentences pregnant with information, "I have observed that the first sigh of disturbed health which has attracted my attention and announced to me a tendency to gout, has been disorder of the heart's action. Its most common form is that of palpitation, fluttering, pause in the heart's action, intermission, or some indication of diminished tone and energy—in a word, impaired power of the organ."

This is an aspect of gout of which little is heard at the present time,—withal a very important matter, often causing much alarm in persons whose lives may be termed, in more senses than one, "valuable," because occurring at a time of life when others are involved in the fate of the individual. As to why this aspect of gout is not much attended to at the present time, it is not easy to say. Possibly to some extent because Dr Garrod says little on the subject in his well-known treatise on Gout. He does not pass the subject by, but he treats it curtly—as indeed he does all the relations of gout to the nervous system. Admirable as his treatise is in every other respect, it is here that it fails to enlighten the practitioner—albeit it is just at this point the said practitioner often most needs light. It is no part of my intention in what is written here to attempt to disparage a very valuable book, but merely to point to a possible explanation as to why gouty disturbance of the heart is not much spoken about, or at least written about at the present time. Yet the disorders as well as the diseases of the nervous system are unmistakably on the increase at the present time, in the sane as well as the insane. There is, indeed, at the present time a tendency to nervous disturbances which, if not presenting to us actually new forms of disease, at least present to us novel aspects of it; and, in so far, fresh morbid acquaintances. In so speaking, I trust I am no alarmist beating the sensational drum and starting pathological bugbears. Rather I am trying to put in a clear light, so far as I can be lucid on the subject, a class of obscure maladies, very often very puzzling to medical men of good general information, and very disturbing to the patient, and consequently needing explanation if that can be furnished.

These maladies here discussed are not of my own discovery, as the quotation from Dr Gairdner's book amply demonstrates. But my line of practice frequently brings such cases under my notice. And I venture to believe that some reference to a few cases selected from my case-book may not be without value to your readers.

The person most liable to gouty neuroses of the heart is usually at or over middle age, and a parent. Consequently any disturbance of the health in such persons affects a family circle, and not the individual merely. Especially is this the case where the heart is affected. The well-known fact that heart disease is common in persons getting up in years, invests all cardiac disturbance with an interest which causes it to be anxiously scrutinized. Neuroses of the heart, unlike disease of the organ, attract the attention to the heart directly and immediately. It is the heart itself which is disturbed, while in disease it is more commonly some result of the impaired heart which forces itself upon the consciousness of the patient. The very fact that the patient complains of the heart puts one on guard at once as to the nature of the malady.

Gouty palpitation is very common, especially when the heart wall is dilated, which means that it is common with ladies at or after the menopause. Gouty angina is also common enough. Why is this? Because when the blood is laden with nitrogenized waste, disturbance of the vaso-motor system of nerves is very liable to follow. Spasm of the arterioles dams the blood in the great arteries, and thus increased resistance is offered to the ventricular contraction on the cardiac systole. Sometimes breast-pang is set up, or in other words *angina vaso-motoria*. Very much more common is what Professor W. T. Gairdner has termed *angina sine dolore*, or imperfect angina, not sufficiently pronounced to give rise to the characteristic agony, but presenting the other features of angina.

There may be palpitation of the heart, or there may be what Gairdner calls "diminished tone and energy." And this latter is the more alarming condition of the two. In either case there is apt to be high tension in the arteries, even when the heart seems faltering; and, as a consequence of this high blood-pressure, a large quantity of urine is voided when the attack passes off. This increased bulk of urine has not, to my mind, been sufficiently appreciated, yet of high diagnostic value in clearing up the vaso-motor element of the case when present. It is a matter which rarely escapes the patient's notice, however. Its absence or its presence is a great matter in guiding the diagnosis; and still more in giving direction to the line of treatment to be pursued. Where angina is vaso-motorial, the blood needs cleansing; where truly neuralgic, the treatment of neuralgia, viz., nervine tonics, are indicated.

At other times the disturbance of the heart is direct, and not the consequence of vaso-motor perturbation. It would seem as if there was some irritation set up in the inhibitory fibres in the vagus, and the heart's action is held back. Of course this effect is more pronounced where the heart wall is weak, either ill-nourished or fatally degenerated. In the latter case the attack is "syncopal" in character—just like syncope produced by other action on the inhibitory fibres of the vagus. Two patients are at present under care,—the one a gouty lady of rank, where the affection is so far linked with gout that she is distinctly gouty, and that she has improved on a line of treatment directed at the gout; the other a compositor, in whom there is no gout apparently, but who is liable to syncopal attacks, with rapid action of the heart, relieved by lying flat on his back, when the heart's action becomes normal. In both the result is the same as regards enfeebled action of the heart. Then there are other forms which present the character of intermittent action. The patient is a medical man holding an official position in India. He was seized with an intense feeling of terror once when out shooting, and shortly afterwards distinctly intermittent action of the heart showed itself. His own opinion was that it was gouty rather than malarial in origin, and after a second interview I came to the same conclusion, and an anti-gout treatment has been followed by satisfactory results confirming this view.

This syncopal aspect of cardiac neuroses has been pronounced of late, so much so that I venture to state my belief that a new phase of disease is coming under our notice, or, at least, this phase is becoming more prevalent. Instead of being rare, it is now frequently met with. It is a state linked at times with overwork, and two of my patients thus afflicted are types of stalwart men, six feet high, and weighing about sixteen stones. In both there is a suspicion of gout to come. But so far their attacks are due to nervous exhaustion from long-continued overwork. Their syncopal attacks are related to a common cause of syncope—stifling, crowded assemblages, while gouty syncope preserves no such relations. This constitutes an essential point of difference betwixt the two forms otherwise the phenomena are the same in the main, differing chiefly in the mode of causation. In one case, an Irish gentleman, there is interrupted and diminished action in the heart and tissues if quiet, while a brisk walk of thirty miles or so improves rather than depresses the heart's action. There is no suspicion of muscular adynamy in the case, nor of any nervous exhaustion, but there is strong evidence of gout.

We see, then, that there are several and various affections of the heart linked with a gouty state, or lithiasis, or lithœmia, whichever term is preferred. Palpitation, or angina from vaso-motor disturbance, and high arterial tension, are two of the gouty neuroses of the heart. Interrupted or intermittent action is another form, while impaired energy is a fourth form. The last is a very distressing form, giving the same sense of impending death as is found in the most marked attacks of breast-pang. For the recognition of any of these varieties it is necessary to be familiar with the general aspect of gouty individuals, without which the diagnosis is impossible—by which I mean not the malady, but its causal relations. Failure of the heart's action is a malady easy enough to recognise, but the cause of it may by no means be so readily apparent. In some cases the diagnosis is by no means easily made, as the following case will show:—

G. W. H., a hardworking clergyman, 53 years of age, consulted a well-known medical baronet for a sense of oppression at the heart on going to bed, or on going out for a walk, with attacks of angina, the pain extending down the left arm, coming on frequently. A grave view was taken of the case, and the patient was sent abroad to rest from all work. He had also begun to feel languid and unequal to his work. Certainly such a case looked not unlike a failing heart from structural degeneration in the heart-wall. Ultimately he drifted to me, and though the case at first sight looked very grave, the more it was looked at the less grave it appeared. After due deliberation I gave it as my opinion that the case was one of suppressed gout affecting the heart. This was received with derision, kindly and polite no doubt, and incredulity. He was put upon a suitable line of treatment. Three weeks later his wife wrote me as follows:—"Your predictions as to my husband's gouty tendency has soon been realized, as he has a slight attack of unmistakable gout in right *toe*." The result was such as Sir Charles Scudamore would have foretold, viz., as soon as the regular gout manifested itself, the irregular symptoms disappeared.

It is not merely the correct diagnosis in such cases which is desirable in itself; it is of paramount importance as directing the line of treatment to be pursued, and is of the more importance, as my personal experience testifies that these maladies, like all irregular forms of gout, are on the increase at the present time. Indeed, for treatment, such diagnosis is invaluable, and I can here appropriately make a quotation from Dr Cumming's presidential address at the Belfast meeting of the British Medical Association:—"Indeed, in dealing with many cases of disease, our question is not, Where is it? but, What is it? Is it gout, or syphilis, or malaria? and so on, as we are well assured that, if we have the key to the enigma, all the varied anatomical changes will become explicable, and, what is of far greater moment, will be found amenable to remedies." And such is the case with the gouty neuroses of the heart.

II.—CLINICAL CASES OF DISEASES OF THE THROAT AND NOSE.

By G. Hunter Mackenzie, M.D., Surgeon to the Eye, Ear, and Throat Infirmary, and to the Throat and Ear Department of the Western Dispensary, Edinburgh.

Sequel to a Case of Tracheotomy for Laryngeal Stenosis, after Measles.—The history of this case has been already recorded (*Edin. Med. Journal*, Oct. 1883). It was found impossible to dispense for any length of time with the use of the tube, until over a year from the date of the operation. The cause of this was neither spasm nor paralysis of the intrinsic muscles of the larynx, which, especially in children, is well known to cause delay in the removal of the canula, but to partial persistence of the original cause—the stenosis, which necessitated the operation. It is most unusual for spasm or paralysis of this nature to persist for such a length of time as one year. The case is explained by the fact that a thickened warty condition of the glottis boundaries resulted from the chronic inflammation, but when the parts were left at comparative rest, and free from irritation, as happened after the insertion of the tube, it gradually disappeared, and the power of respiration through the normal channel became re-established. That the vocal cords must have cleared up is evident, not only from this, but from the return of the voice, which, instead of being as before the operation whispering aphonic, is now quite normal in character. By this case an important principle is enunciated, for if the rest and absence of irritation afforded by tracheotomy be sufficient to restore the vocal cords to their normal condition, the operation of thyrotomy in such cases is unnecessary, and the great risk of inducing permanent aphonia is obviated.

Acute Traumatic Laryngitis from Swallowing a Pin; Tracheotomy; Recovery.—This case occurred in the practice of Dr Hamilton Wylie, who kindly asked me to see it with him. A child, æt. 3 years, was supposed, two days previously, to have swallowed a pin, with which he had been observed playing shortly before. This act was immediately followed by a considerable amount of local irritation and slight dyspnœa, but no trace of the pin could be felt. Having satisfied ourselves that impaction had not occurred, we continued palliative treatment till next day, by which time the respiration had become so impeded as to necessitate tracheotomy. The method of cutting through the isthmus of the thyroid gland, as recommended by the late Dr Foulis, of

Glasgow, was adopted without any hæmorrhage. No trace of the pin could be seen, although careful search was made for it. The case was complicated by an attack of erysipelas, from which the child had previously suffered. Complete recovery ensued, but without the pin having been found, though the fæces were watched for a considerable period.

The occurrence after this method of serious traumatic laryngitis in children is well worth notice. Sometime ago I had the opportunity of seeing, through the kindness of Dr Spence of Burntisland, a precisely similar case from swallowing a nut-shell. In the case of a young child, the mere temporary contact of a foreign body, especially if it possess roughened edges, with the pharyngo-laryngeal structures, seems sufficient to induce such an amount of œdematous inflammation as greatly diminishes the calibre of the superior laryngeal aperture, and threatens asphyxia. Impaction of the foreign body is not necessary to the production of this form of dyspnœa, for in such instances as the above there is no evidence even of its temporary occurrence.

Facial Erysipelas following Chronic Inflammation of the Nasal Mucous Membrane. (Chronic Rhinitis).—A woman, past the middle age, had suffered for several years from a troublesome inflammation of the lining membrane of the nose, which in consequence had become much thickened. In the autumn of last year, after exposure to cold, an acute exacerbation of the old complaint took place, and in the case of the left nostril gradually extended to the exterior of the ala, and thence spread with rapidity over the face and part of the scalp. The patient suffered severely, but recovered after the use of the usual remedies.

The possibility of nasal inflammation leading to erysipelas is referred to by Frænkel in his article on Diseases of the Nose in Ziemssen's *Cyclopædia*. Several other cases have lately been noticed in dispensary practice, where a tendency in this direction has been manifested, but in none was the inflammation so severe or extensive as in the case now recorded.

Congenital Tumour of both Sterno-mastoid Muscles.—I am indebted to Dr Deverell, Abbeyhill, for this case. A healthy child, aged three months, had a hard globular swelling occupying the centre of the right sterno-mastoid muscle, about the size of a pigeon's egg, and extending forward to about the angle of the jaw. On the left side there was general induration of the muscle in its entire extent. On both sides the affected parts of the muscles felt like bone. By pressure on the right tumour a slight spasmodic laryngeal cough could be induced. Both tumours completely disappeared under gentle friction.

The occurrence of single congenital tumours of the sterno-mastoid is not rare, but it is unusual for both muscles to be simultaneously affected. The causation of this affection is very obscure. It has been shown to occur independently of syphilis, or prolonged or difficult labours. When such a tumour is present it is always congenital, but is usually unnoticed for some weeks after birth, probably, as suggested by Sir Wm. Jenner, on account of a careful examination not having been made until this time. It disappears without treatment. Histologically, the muscle shows fibro-nuclear infiltration of its fibres, the result possibly of an erratic form of connective tissue development.

Malignant Disease of the Pharynx.—Deep ulceration of the pharynx usually belongs to the tertiary period of syphilis. The following instance of malignant ulceration was sent to the Eye, Ear, and Throat Infirmary, by Dr Ronaldson, on 29th April 1884. Patient, female, aged 45, had for some time back complained of pain and difficulty in deglutition, with nasal regurgitation of fluids. On laryngoscopic examination; a red, slightly raised patch about the size of a pea was observed on the retro-pharyngeal wall, centrally situated near the level of the middle of the epiglottis. There was slight granular enlargement on the left side of the neck. No other abnormality could be detected. Sedative inhalations were ordered. On the 10th June the red patch had become more prominent, and now appeared as two distinct nodules separated by a groove and situated on an inflamed base, with a tendency to ulceration at the summit. These nodules became daily more prominent, until they assumed such proportions as to approach the epiglottis and partially obstruct the respiration. Meanwhile, from their base ulceration crept downwards along the pharyngeal wall. The appearance at length presented was that of a proliferating mass, cleft by a fissure near its centre, springing from the posterior wall of the pharynx, and obstructing the view of the arytenoid cartilages and posterior parts of the vocal cords. This mass also concealed what appeared to be a deep ulcer, which extended downwards as already stated. The disease did not implicate the larynx, for, beyond an occasional huskiness from cold, the voice continued unaffected, and the vocal cords acted normally throughout.

The treatment adopted was soothing inhalations, sedative insufflations of iodoform, morphia, and boracic acid, and trial was also made of antisyphilitic remedies. The exuberant granulation looking tissue was removed to some extent by the galvano-cautery, on account of the respiratory impediment to which it gave rise. Pieces so removed showed the microscopical characters of epithelioma. Hæmorrhage was frequent, and occasionally severe. Great difficulty in deglutition was experienced towards the latter part of the case, and as all operative procedure was declined by the patient and her relatives, little could be done towards the abrogation of this serious symptom.

This case in its course differed widely from syphilis. The typical (tertiary) syphilitic lesion of this neighbourhood is the gumma, which ends, if untreated, in deep ulceration. In the *Lancet* for 1881, vol. ii. p. 949, I have placed on record a case of gummous tumour of the pharynx, which occupied almost the same position as the cancer in the case now under notice, and extended forward to such an extent as to press against the epiglottis. But the appearances, symptoms, and behaviour under treatment of the two diseases are very different. A gumma has a more or less globular appearance; its surface is comparatively smooth, there is an absence of the excruciating symptoms of cancer, and it readily yields to the iodide of potash in large doses. The diagnosis of malignant disease of the pharynx or pharyngo-larynx in its early stages is materially aided by a consideration of certain symptoms and physical signs. Of the former the most important is *nasal regurgitation of fluids*, and of the latter, *localization of inflammation.* A combination of these two characteristics, namely, nasal regurgitation of fluids, without gross structural change accompanying and accounting for it, and a very small, well-defined spot of inflammatory redness, probably slightly coated with muco-pus, is of bad omen, and may be held as indicating the commencement of malignant disease. This combination indicates a degree of dysphagia altogether disproportionate to the extent of local disease, and is probably owing to early implication of the nerves of the part. (For further consideration of this subject see *British Medical Journal*, 1882, vol. i. p. 306, and *Glasgow Medical Journal*, Sept. 1882.)

Catarrh of the Posterior Nares and Naso-Pharynx.—In a great number of cases of sore throat the primary source of the mischief is not in the larynx, but in the nose and naso-pharynx. This is more especially the case with that variety known as "clerical sore throat." In these cases the affection of the larynx is undoubtedly secondary in character, and treatment directed solely to it is likely to prove disappointing. The indications for proper treatment are scarcely afforded by the history or symptoms, but by a physical examination of the retro-pharyngeal wall and naso-pharynx. This usually discloses a collection of muco-pus, with a roughened, granular condition of the mucous membrane, and some dilated veins. The mucous membrane is never ulcerated; should this be the case, there is an undoubted syphilitic taint present.

The treatment of this complaint consists in the use of the nasal spray, using in the first place a solution of soda for its solvent and cleansing actions, and afterwards a watery solution of tincture of iodine for its alterative effects. At the commencement of treatment each of these sprays ought to be used at least six times daily, on account of the rapidity with which the muco-purulent secretion re-accumulates. In more obstinate cases with grosser lesions, such as granulations of the mucous membrane and dilated vessels, the galvano-cautery gives best results, touching with it in succession each diseased point.

The Diagnosis of Laryngeal Tuberculosis.—In many instances it difficult to diagnose the existence of tuberculosis of the x. The symptoms and history of the case, together with, probably, coexistent tubercular disease of the lungs, suffi- y point towards the nature of the malady. It ought, how- to be borne in mind that the larynx is essentially the place syphilis and tuberculosis commix and intermingle. But to the diagnosis between simple and tubercular laryngitis attention is now chiefly directed. Holding the opinion that onic laryngitis, originally simple in character, may subse- ly degenerate and become tubercular, it is important to be to differentiate between these two conditions, alike in regard atment and prognosis. These points are illustrated by the ring case:—A gentleman, æt. 59, with a rheumatic history, lted me on 28th March 1883 on account of a persistent eness which had now culminated in loss of voice. There was idence of constitutional disturbance. Patient had enjoyed health until the commencement of his present illness, which about a year back, and was supposed to have been induced tting in a draught. The laryngoscopic appearances were usually considered indicative of simple chronic laryngitis. percussion note at the right pulmonary apex was very ly impaired, and expiration was prolonged with a faint hitic click at the end of inspiration. The laryngitis was d by the application of metallic astringents with at first actory results. Shortly afterwards tubercle bacilli were ted in the laryngeal secretion, as also in the expectoration. months later the laryngoscopic appearances had assumed an ubted tubercular character, with ulceration, necrosis, and hment of arytenoid cartilages, and destruction of the vocal . The case terminated fatally in February 1884. It is y of notice that, on autopsy, not only were tubercle bacilli in and about the affected parts of the larynx, but also in the s coating the interior of the trachea. They infested the of the laryngo-tracheal portion of the respiratory tract, but associated with destructive ulceration in the larynx only.

this case the detection of tubercle bacilli in the laryngeal ion gave a correct clue to the diagnosis, and unfavourably ed the prognosis. Without this evidence of tubercular e, it could not have been declared with certainty that culosis of the larynx existed, for there was nothing in the goscopic character to indicate that the initial stage of simple mation had merged into the specific. In suspicious cases onic laryngitis, therefore, a correct diagnosis can only be made the removal of some of the secretion, which can readily be plished by means of a brush, and its careful examination for acilli of tubercle.

III.—RECORD OF CASES TREATED IN WARD XXVIII., ROYAL INFIRMARY, EDINBURGH, FROM 1ST NOVEMBER 1883 TO 30TH APRIL 1884.

By ANGUS MACDONALD, M.D.

(Read before the Edinburgh Obstetrical Society, 25th June 1884.)

(Continued from page 313.)

GROUP B.—OVARIOTOMY.

In this group we include two cases. Strictly speaking only the first case belongs to this class. The second case proved to be a tumour of Fallopian origin. But we include them together as the symptoms and treatment are so much alike as to render different diagnoses impossible before abdominal section.

CASE I.—M. P., æt. 23, unmarried, was admitted into Ward XXVIII. on 24th Jan. 1884, on recommendation of Dr C. Lunan, Blairgowrie, complaining of a large swelling in the abdomen, of pain in the right side, of sickness, and of only being able to digest milk diet.

Two years ago she suffered from severe pain in the right side, and inability to eat. In August last she first noticed the swelling, and since that time it has rapidly increased in size. She had considerable menorrhagia and metrorrhagia from May till August last year.

Condition on Admission.—Abdomen distended to size of eight or nine months' pregnancy by a tumour of slightly uneven outline, but on the whole of smooth contour. The tumour projects very far forwards inferiorly, and seems to lie more to the right than the left. Percussion note is dull over the anterior surface of the tumour, clear in the flanks far back. The tumour appears to move slightly under anterior wall with forced inspiration. Measurement round umbilicus, 35½ inches; about 1½ inches below umbilicus measurement is 38 inches; from right anterior superior spine to umbilicus, 9½ inches; from left anterior superior spine to umbilicus, 8¾ inches; from symphysis pubis to umbilicus, 8½ inches. P. V.—Tumour presses down into anterior half of pelvis, displacing the uterus towards the left and backwards. No part of the tumour is found in the pouch of Douglas. Sound enters towards the left and upwards nearly 3 inches. Per Rectum.—Small body of uterus is distinctly felt, apparently separate from the body of the tumour.

On 6th Feb. the patient was after due preparation submitted to operation. The room had been sprayed for some hours, and the usual antiseptic precautions were employed, only the spray was not used during operation. The abdomen was opened with ease. It was then found that the tumour was attached to right broad ligament, and nat there were considerable adhesions of its upper anterior part ith the great omentum. Otherwise the tumour was free. The nly considerable cyst contained in the tumour was tapped, and bout a pint of fluid run off. The edges of the tumour were now urrounded with sponges, and the tumour incised. The hand was hen passed into the interior, and the multitude of small cysts orming its mass was thus broken up, and its contents squeezed ut. In this way the tumour was got lessened in bulk, so as to pass hrough the abdominal wound, which originally measured about ¼ inches. The omental adhesions were now fully exposed, and the ttached part of the omentum was divided into a number of eparate portions and tied by catgut ligatures. The pedicle was ery broad, and rather thin and short. It was transfixed and tied ith silk ligatures, secured by the Staffordshire knot. As it eemed to ooze a little after being tied, and the tumour separated rom it, the loose ends of the thread were brought round the face f the pedicle, and again tied. The sponges were now removed om the abdomen, and the whole cavity thoroughly squeezed out. he omentum was carefully inspected, and no bleeding point disovered. The ligature was now cut short, and the pedicle dropped. he abdominal wound was secured by deep and superficial sutures, nd the wound dressed with protective and salicylic wool and a annel bandage. The patient was put to bed surrounded by hot ottles, and a brandy enema administered.

The operation lasted 1¼ hours. The solid weight of the tumour as 4 lbs., and the fluid weighed about 12 lbs.

Patient's recovery was excellent, though somewhat retarded by ersistent sickness and vomiting, which lasted for first ten days ter operation, during which time she was fed by enemata. For st few days temperature ranged from 100° F. to 101°·8, after that became normal, and remained so. Deep stitches were removed 17th day—union complete. Patient improved daily after vomiting ased, and was dismissed on 10th March 1884 perfectly well.

Since this patient returned home, I have heard that she conued to keep well. It is to be noted that the way the tumour as fixed above by the omentum, and below by the pedicle, ndered its removal a little difficult. Its mass being made up of nall cysts with thick contents, did not permit of its bulk being aterially lessened by tapping, and I was thus obliged to incise it, d break up its contents before I was able to remove it. Some xiety was caused by finding that the fluid contents of some of e cysts, when subjected to microscopic examination by Dr ulis, was found to contain sarcomatous elements. This led to a ecial examination of the tumour, and the detection of sarcomaus thickening of certain portions of its walls. But as there re no proliferating masses on any part of the surface of the mour, we have the best reason to expect that the patient will ntinue to do well, having escaped infection from the sarcoma.

CASE II.—Mrs P., æt. 21; married two years, no children; admitted into Ward XXVIII., 18th Dec. 1883, on recommendation of Dr Cappie, Edinburgh, complaining of pain in the right groin. Twelve months ago patient was suddenly seized one evening with a sharp pain in her right side, mustard was applied, and relief was obtained for the time. From that time till now patient experiences at times a feeling of heat in the side. Menstruation natural. Health has always been good.

Condition on Admission.—General appearance flabby and chlorotic. Abdomen distended to about the size of a seven months' pregnancy. The tumour is more developed towards the left than the right. Measurement round the most prominent part of the tumour, about an inch below umbilicus, is 30¼ inches. From umbilicus to right ant. sup. spine, 6¼ inches; to left ant. sup. spine, 6½ inches. Tumour feels smooth all over; appears to move with respiration. Percussion in right flanks clear; in left somewhat dull. Anteriorly over whole tumour is marked dulness. Fluctuation and fluid thrill are felt throughout the tumour. P.V.—Posterior part of pelvis and entire inlet are blocked by a tumour which moves in unison with abdominal tumour to a certain extent. Uterus is displaced to the left and upwards. Cervix uteri can be reached, but with some difficulty. Sound passes upwards and forwards without pain 2½ inches.

Dr Macdonald performed laparotomy on 26th Dec. 1883. On entering the peritoneal cavity the omentum and a portion of the bowels were found adherent to a large cyst which occupied the right side of the abdomen. The aspirator was passed, and about ℥ 90 of a dark amber-coloured fluid drawn off. On attempting to remove the cyst it was found to pass deep down into the very base of the pelvis, so that it was impossible to complete the removal without first separating the bowel adhesion, and, second, opening the broad ligament so as to get the cyst gradually enucleated from between its folds. In doing so some hæmorrhage occurred necessitating very numerous ligatures. The tumour towards the uterine end was firmly adherent to the broad ligament, so that the latter had partly to be included in the pedicle and partly to be torn into small pieces and tied. The pedicle proper was very thick, hard, and short, and proceeded from the right upper angle of the uterus. On examining for the left ovary, there was found protruding from the left broad ligament near the normal site of the ovary an elongated bowel-like cyst with exceedingly thin walls, which occupied the left iliac and left lumbar regions. Over its anterior surface, and firmly adherent thereto, passed a considerable knuckle of intestine. As far as could be judged the cyst bulged between the layers of the mesocolon. The bowel was firmly adherent to this cyst down to its pedicle, which proceeded from the left upper corner of the uterus in the same manner as the other cyst from the right. There was considerable difficulty and much bleeding during the separation of the bowel from this cyst, numerous ligatures being required. During the process of separation the cyst burst, and a large quantity of a clear serous looking fluid was squeezed out. The pedicle was now secured close to the uterus, and its other adhesions tied in portions and divided. There was seen to be still some capillary oozing from the right side and floor of the pelvis, but no distinct bleeding points could be discerned. The abdominal wound was now brought together in the usual fashion after the cavity had been well sponged out; the wound was dressed, and a glass drainage tube introduced into its lower angle. The patient was much exhausted after operation, and had twice a brandy enema. On the day of operation, at 5 P.M., the pulse was feeble, 130 per min. Dressing changed. There was squeezed from the sponge and sucked from the glass tube ℥ 5 of sero-sanguineous fluid; ℥ss. of brandy ordered every two hours. 10 P.M.—Pulse stronger; temp., 100°·2. *27th Dec.*, 10 A.M.—Wound looks healthy; ʒ 9 of sero-sanguineous fluid sucked from tube. Pulse firmer; ordered to diminish brandy by one-half. 5 P.M.—Dressing changed; ʒ 8 sucked from tube; temp., 100°; pulse, 139; $\frac{1}{6}$ gr. morphia, $\frac{1}{60}$ gr. atropine administered hypodermically. *28th Dec.*, 10 A.M.—Patient seems easier; ℥ 1 sanguineous fluid got from tube and sponge. Temp. 99°·2; pulse, 128. 2 P.M.—Temp., 100°·4; pulse, 140. *29th Dec.*—Hypodermic of morphia and atropine given at 1.30 A.M. and 10.30 A.M. At later hour discharge was septic and smelling. Dr Macdonald washed out abdominal cavity with warm carbolic lotion, 1–100. 3 P.M.—Temp., 100°·8; pulse, 150; another hypodermic given. 10 P.M.—Abdomen again washed out. 12 P.M.—Temp., 102°·4.

30th Dec.—Temp. gradually rose to 103°, then 104° at 6.50, when patient died.

No post-mortem allowed.

This case presented points of special and unexpected difficulty. Considering that there was so free fluctuation in the tumour, and that the patient was a healthy woman, there appeared no ground to expect unusual operative difficulty, except in the facts mentioned in the case that the tumour projected deeply down on the right side of the uterus, and elevated the organ at the same time. It would appear that in this case we had to deal with two huge enlargements of the Fallopian tubes. At any rate, from the peculiar shape of the tumour on the left side there is the best reason to regard this as of tubal origin. The parts comprising the broad ligament were so disfigured by pressure of the cysts that it was impossible, even with the most careful scrutiny, to detect any trace of ovaries or tubes to make certain that the cysts originated in the tubes. But the close connexion of such pedicle as the tumour possessed with the upper angle of the uterus, and the absence of any trace of Fallopian tubes, seem to imply an origin from the tubes.

I cannot help thinking that, notwithstanding the severity of this case, all might have gone well had we not had in the large ward some rather putrid cases. The drainage tube seems to have been a source through which the peritoneal fluids were made septic. I need hardly say that we used every precaution within our power, by protecting the end of the tube from the air, to avoid this result. Be this as it may, it is evident that the patient died of septicæmia in spite of all our efforts.

GROUP C.—CASES OF TRACHELORRHAPHY.

Of these there were in all five cases. They are recorded with as great brevity as possible, as they are all so much alike.

CASE I.—Mrs G., æt. 28, admitted 13th Dec. 1883, complaining of pain in back and hypogastric region, worst at menstrual periods, with a considerable amount of menorrhagia and leucorrhœa.

Physical Examination.—Vaginal portion of cervix split deeply towards left side and posteriorly, so as to make a small posterior and large anterior lip. Uterus enlarged and tender. Ovaries tender, left enlarged.

Treatment.—Patient was put on hot douche for a few days, then Emmet's operation was performed. Four stitches were introduced on the left and three on the right side. On the 9th day the stitches were removed. Perfect union resulted.

CASE II.—Mrs A., æt. 24, admitted 24th Jan., complaining of pain in the back and belly. Patient has had two children, the youngest 15 months ago. Had miscarriage 4 months ago, and since then her menstruation has been irregular and leucorrhœa has been present.

Physical Examination.—Cervix deeply torn on both sides, more especially on the left; considerable hypertrophy of both lips, as also erosion and eversion of the same. Body natural, also ovaries.

Treatment.—Hot douche night and morning. *4th Feb.*—Dr Macdonald performed Emmet's operation, and introduced three silver wire stitches on each side. *11th Feb.*—Stitches removed. Both sides completely united.

CASE III.—Mrs H., æt. 31, admitted 6th March 1884, complaining of pain in the back and sides, also of white discharge and menorrhagia. Patient has had four children and one miscarriage.

Physical Examination.—Cervix is somewhat deeply torn on the left side; vaginal portion considerably enlarged. Body of uterus large but normal in position. Some tender stringy fulness behind the uterus.

Treatment.—The patient was put on the hot douche till 19th March, when Dr Macdonald performed Emmet's operation. Eight stitches were required. The stitches were removed on the eighth day. *21st April.*—Patient was dismissed. Perfect union had taken place on both sides.

CASE IV.—Mrs C., æt. 26, admitted 24th March 1884, complaining of pain in her left side and of a white discharge and menorrhagia. Patient has had two children, and dates her illness from the birth of the last one.

Physical Examination.—Short vagina. Cervix split on the left and right sides; anterior and posterior lips everted, forming the characteristic "swine-snout" cervix. Body of fundus enlarged and tender. Left ovary distinctly enlarged and adherent to the uterus.

Treatment.—After patient had been prepared by rest and hot douche Dr Macdonald performed Emmet's operation. Eight stitches were required. The stitches were removed eight days after the operation, when it was found that union had not taken place.

CASE V.—Mrs S., æt 27, was admitted in the beginning of April 1884, complaining of extra-hæmorrhage at periods and leucorrhœa between periods, with backache and pain in left side. Examination revealed the cervix split rather deeply towards the left. After some preliminary treatment by hot douche, this case was operated upon on 30th April. Only two stitches were needed on the left side. There was good adhesion, and the patient was dismissed cured on 20th May.

The above five cases of Emmet's operation for cervical rupture are fairly typical of the class of cases that appear in my opinion to warrant the operation. I might even except the last case, which was scarcely of sufficient severity to warrant operative interference, had the patient not been particularly anxious that it should be performed. It will be seen that four out of five cases were completely successful. But a failure of union is not nearly so common as that proportion would imply. Indeed, it is very uncommon.

I have to notice here that in the case of Mrs H. there was considerable bleeding about the fifth day, apparently due to the stitches cutting rather deeply in the transverse direction. It was speedily stopped by an injection of hot water. The case, notwithstanding, continued to do well, and in the end I never saw an example of better union. The conditions that seem to me to warrant this procedure are deep cervical tears with eversion and hypertrophy of one or of both lips, accompanied with menorrhagia at the periods, and with leucorrhœa between times. In addition, there is, besides, usually backache and sometimes uterine enlargement. Whether the latter is in any way related to the cervical condition, or is part and parcel of the general effects of the severe labour which caused subinvolution of the body and tear of the cervix is, I think, doubtful. But that the cervical hypertrophy is caused by the tear is, in my opinion, beyond doubt.

It is, moreover, seen to disappear slowly after the operation has been successfully performed, requiring many months, however, for its perfect accomplishment.

Such cases presented the stock-in-trade of the now nearly entirely abandoned treatment of erosions of the cervix by lunar caustic.

The irritated and hypertrophied mucous membrane was looked upon as an ulcer and treated accordingly, the result being to aggravate the irritation. We now, after appropriate preparatory treatment by rest, glycerine plug, and hot douche, propose to remove the redundant tissue and fold in the mucous membrane so as to exclude the cervical mucous membrane from the irritation of the acid vaginal secretion, and the cervix slowly returns to its normal condition.

That Emmet's operation does not induce sterility, and that the cicatrices need not be expected to tear in a future pregnancy, was demonstrated at one time by a case, the operation on which has been already reported by me in a former paper on this subject.

This patient was barely healed from the operation when she became pregnant. She was ultimately confined at the Royal Maternity under Dr Keiller's care, who was kind enough to send her on recovery to see me. I found the lines of the cicatrices quite perfect.[1]

GROUP D.—HÆMORRHAGIC ENDOMETRITIS.

CASE I.—Mrs P., æt. 27. Has had three children, last four years ago. Admitted 16th Nov. 1883, complaining of bearing down pain and uneasiness all over her inside, which has lasted for the last 2½ years. Has much hæmorrhage at the periods.

Physical Examination.—Vaginal portion of cervix rough, notched irregularly. Body of uterus enlarged, movable, but very tender to touch. Sound enters upwards and forwards 3 inches without special pain.

Treatment.—*20th Nov.*—Small Tupelo tent introduced into the cervix. *21st Nov.*—Larger tent introduced. *23rd Nov.*—Uterus curetted, and a considerable quantity of hypertrophic mucous membrane removed. *28th Nov.*—Patient says she is better and feels no pain. *5th Dec.*—Os well contracted; uterus normal size. Patient dismissed.

CASE II.—Mrs W., æt. 34, admitted 22nd Dec. 1883, complaining of pain across the back and extra flow. Patient had one child 11 years ago at 7½ months, labour being brought on by a fall from a cart. She had no medical attendance at her confinement. A month after her confinement she was seized with a severe flooding, which lasted, more or less, for a month, and shortly afterwards with a severe pain in the back. She recovered with blisters and injections, and has been quite well till six months ago, when she began to menstruate every fortnight.

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[1] If it be true, as urged by Emmet, and to some extent borne out by the fact that malignant disease of the cervix is so much more common in women who have children than in the sterile, we have an additional strong reason in favour of operating in all severe cases of cervical laceration. The subsequent results in the removal of pain, leucorrhœa, and hæmorrhage, so far as I have been able to follow my cases, have been, on the whole, quite satisfactory.

Physical Examination.—Body and fundus uteri distinctly enlarged and tender, but movable. Tenderness and some stringy adhesion in fold of Douglas. Vaginal portion of cervix hypertrophied; lips of external cervix everted. Tenderness in region of right broad ligament. Left ovary felt very tender and enlarged. Sound enters upwards and forwards 3 inches, causing some pain; surface of mucous membrane communicates a feeling of roughness to the sound. Per speculum—Anterior lip of cervix everted and a little eroded.

Treatment.—Hot douche night and morning till 9th Jan., when Tupelo tent was introduced. Next day tent was removed and uterus curetted. The whole of uterus was lined with pulpy mucous membrane. Temperature and pulse normal after operation. *29th Jan.*—Cervix contracted well; sound passes without pain nearly 3 inches; the feel of the body is much firmer.

CASE III.—E. G., æt. 29, nullipara, admitted 23rd Jan. 1884, complaining of her courses never stopping during the intervals between the periods. Patient admits to having had a miscarriage sometime before admission.

Physical Examination.—Vaginal portion of cervix soft and elastic. External os small, and from it exudes a grumous fluid with a bad odour. Uterus enlarged and tender, but movable. When cervix is pulled down by volsellum, uterus straightened; sound passes 4½ inches. In upper part of its course sound passes over rough surface, communicating a rough feeling to the hand.

Treatment.—*26th Jan.*—Small tangle tent introduced. *27th Jan.*—Large sized Tupelo tent introduced. *28th Jan.*—Uterus curetted; some membranous-looking masses removed. Patient had no bad symptoms after operation. Discharge gradually ceased; on 15th Feb. it had stopped entirely. Temperature never rose. *21st Feb.*—Dismissed cured.

CASE IV.—Mrs M., æt. 34. Had two children, youngest seven years ago. Admitted 24th Jan. 1884, complaining of loss of appetite, white discharge, and painful micturition.

Physical Examination.—Cervix rather patulous and anteflected. Uterus very much enlarged; sound enters over 3 inches. No pain complained of when anterior and posterior walls of bladder are pressed against each other.

Treatment.—Hot douche at first, then cervix was dilated with Tupelo tents, and interior of uterus curetted. After curetting, patient felt better for a few days, when her old bladder pain returned. Three weeks after curetting she was examined, when uterus was found to be still large, but not so flabby as before curetting. A No. 5 Galante pessary was introduced with the view of raising the uterus and taking the drag off the base of the bladder, as the bladder irritation appeared due to this. After this the patient was free from pain, and after a No. 7 Galante was put in place of the No. 5, she was dismissed on 8th April 1884.

CASE V.—Mrs R., æt. 22, admitted 21st Feb. 1884, complaining of pain at the foot of her abdomen, and profuse bloody discharge. Patient had a flooding a week before admission; since then the pain and discharge has continued. She had not menstruated for two months previously. On examination a rounded polypoid-like body was felt occupying the upper two-thirds of the dilated cervical cavity. Dr Macdonald removed the body with his fingers, when it was found to be an ovally shaped placental polypus about the size of a walnut. *4th March.*—Discharged cured.

Four of the above five cases represent varieties of endometritis with bleeding as their leading symptom. The bleeding in three of these cases—second, third, and fifth—was directly traceable to an ill-cured abortion. In the fifth case we had the presence of a placental polypus as the active source which maintained the uterine enlargement and the endometritic irritation. The other two cases are by no means so clear as to their cause. In them the dilatation of the cervix and the subsequent curetting were undertaken tentatively. Both patients had been long ill. Both patients had long suffered from endometritis. Both had resisted the measures adopted by the medical gentlemen in charge of them. Accordingly, I was anxious to know whether some polypus or other structure existed in the cavity of the uterus, and dilated to solve this matter. Finding nothing, I curetted in the hope that this might remove any redundant mucous membrane, and this along with the cervical dilatation acted as a means of rendering the uterus firmer and diminishing its bulk. The first case was very greatly improved by this means. The second did not benefit so largely, probably because the uterus was the subject of commencing fibroid degeneration. The three cases more or less closely referable to abortion form a class for which the method of curetting is peculiarly suitable. Such cases left alone are found to exhaust the patients by nearly continuous hæmorrhage. When the hæmorrhage is absent a leucorrhœal discharge comes on. If the case is continued long enough uterine hypertrophy by subinvolution is established.

Such cases, if dealt with early, show in the polypoid structures, or scrapings removed, evidence more or less pronounced of decidual elements. According to microscopical observations made for me on this subject by Dr Chapman, this is by no means true if the case is allowed to proceed unaided for some months. It is then found that the soft hypertrophied mucous membrane loses all the characters of its decidual origin, presenting merely great enlargement of the uterine glands, multiplication of the cellular elements of the mucous membrane, with apparently hypertrophy of the vessels. The connective tissue cells are seen to be actively enlarging. The glands and the interglandular surfaces continue covered with thin cylindrical epithelium, and there appears simply, as already pointed out by Olshausen, to be a great hypertrophy of the normal constituents of the mucous membrane.

If the case is a very old one, Dr Chapman has further observed that there is a tendency in the glands to lose their epithelial covering and become open spaces, whilst the connective tissue cells of the mucous membrane become much smaller than natural, and the mucous membrane altogether thinner.

In the treatment of this hæmorrhagic or fungoid endometritis, whether it originates from an ill-treated abortion or otherwise, I think there is nothing so good as careful removal of the superabundant tissues by curetting. To do this thoroughly, however, you need to dilate the cervix, as you cannot get a suitable instrument through the undilated os internum. The danger of dilatation is no doubt real, but it is greatly lessened by the use of careful antiseptic precautions, such as thoroughly washing out the uterus and vagina before and after operation. Its dangers are more than compensated for, I think, by the thoroughness and safety of operation secured thereby. A steel curette should be used. Such instruments as Munde's dull-wire curette are of no use whatever for such cases. Only the unhealthy mucous membrane comes away. The operator at once knows by the feel, and by a peculiar grating sensation communicated to his hand by the instrument, when he has reached healthy tissue.

The above two cases are only a sample of a large number of cases of the same kind similarly treated, which have fully justified the curette as the proper means of treatment in endometritis with hypertrophy of mucous membrane and hæmorrhage.

GROUP E.—LACERATION OF PERINÆUM.

Of these there were two cases, as follow:—

Mrs H., æt. 34, admitted 20th Feb. 1884, complaining of something coming down, and incontinence of fæces.

Patient's last labour, 11 months ago, was an instrumental one; since then her fæces have escaped involuntarily. Four months after her labour she felt a tumour protruding from her vagina.

Physical Examination.—Perineum deeply torn, with considerable formation of rectocele, also some prolapse of anterior vaginal wall. Uterus is anteverted, and does not come into view when patient is told to press down.

Treatment.—*4th March.*—Dr Macdonald rawed the edges of the perineal tear and brought them together with a number of silkworm gut sutures. Perfect union resulted. Patient was dismissed on 24th March wearing a perineal pad and feeling perfectly comfortable.

CASE II.—Mrs M., æt. 38, admitted 27th Feb. 1884, complaining of discomfort from a tumour which comes down into her vagina whenever she is on her feet.

Patient's present illness began eight weeks before admission, after her last labour, which was a precipitate one. She has been confined to bed ever since her confinement, as whenever she attempted to get up the tumour came down. For four weeks after her confinement she had incontinence of fæces; latterly she has had control over them.

Physical Examination.—Perineum entirely gone, the sphincter ani is divided by a tear which passes half an inch up the recto-vaginal septum. There is some prolapse of anterior vaginal wall. The uterus is anteverted.

Treatment.—*14th March.*—Dr Macdonald rawed the edges of the rectal and perineal tears, and brought them together with silkworm gut sutures. On the 9th day stitches were removed, when union was found to be defective in the perineum, but the rectum and about ¾ of an inch in front of it were found well united.

Dismissed, 7th April, improved.

The above two cases present examples of the troubles that may be expected to follow in the wake of laceration of the perineum, and form a strong argument in favour of sewing up these tears whenever they occur, as this is so much more easily effected then than after the parts have shrunk and become distorted by long continuous tears.

For some time—four years or more—I have entirely given up the use of silver wire in these operations, and employ only silkworm gut. It is non-irritating, does not swell up, and gives extremely little pain. Furthermore, it is so flexible that it does not interfere with the dressing, and gives rise to no inconvenience in removal. It is therefore with considerable surprise that I read, in Dr Lusk's book on Midwifery, the statement that silver wire is best for those operations. I have no hesitation in stating that such opinion is obviously erroneous, and that if he, or any one else, will give silkworm gut a fair trial, he will soon cease to use silver sutures.

Only two points require attention in its use. The first is that the first knot must be made double to prevent the suture slacking while tying the second knot, and the second point is that the sutures, to secure due coaptation, require to be passed pretty close to one another.

The rectal tear, when present, I always in the first instance bring together with catgut sutures, which are placed close together and then cut short. After this the operation is conducted precisely as if no rectal tear had existed. If possible the stitches ought to be left in for seven days at least. The conditions requiring earlier removal are when the stitches cut deeply, or when intense œdema or erysipelas of the parts supervene.

(*To be continued.*)

IV. — PRESIDENTIAL ADDRESS AT THE TWENTIETH ANNUAL MEETING OF THE NORTH OF ENGLAND BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

By JAMES MUNRO, M.D. (Edin.), Barnard Castle.

GENTLEMEN,—My first duty is to thank you cordially for the great honour you have done me in electing me president for the next year of this large and important branch of the British Medical Association, and for the able and courteous manner in which my predecessors have discharged their duties it was an honour quite unexpected and undeserved on my part, and which I should have accepted with more reluctance than I have done, had I not believed that you, my professional brethren, would be indulgent to my faults, shortcomings, and inexperience; and knowing that we have the good fortune to have such a good and experienced secretary, my responsibility will thereby be diminished, and I will endeavour to discharge my duties, with your aid and co-operation, to the best of my ability, and I hope that the objects and interests of this branch will not suffer any depreciation during my term of office.

My second duty is, in the name of the North of England branch of the British Medical Association, to welcome you to Barnard Castle; and as this is the first time the annual meeting of the branch has been held here, although Barnard Castle and Teesdale are well known to some of you, still others may have little acquaintance with this beautiful dale, therefore I had thought and intended to detain you a few minutes to introduce this district to your notice, and to give an epitome of the origin and history of Barnard Castle, and afterwards to state something of its suitability as an increased health resort, from its splendid and beautiful situation, surrounded with magnificent and varied scenery, its very pure air and proximity to the hills, and plentiful supply of good water—a combination of conditions and circumstances of considerable value in convalescence; but on second thoughts I have decided to omit this, as it would occupy too much time in combination with the subject I have chosen.

It is exactly a quarter of a century, this month, since I had the honour of being a member of the medical profession, and I may say all that time passed in Barnard Castle; I thought it, therefore, more appropriate and suitable, as this term marks an important epoch in one's life, in other respects, to give a brief review of some parts of my own practice here during the last twenty-five years, so that I will thus be keeping up the continuity with regard to Barnard Castle, which cannot boast of a large population, or of the means contributing to large industries and wealth, or of the application of recent discoveries and applications of science to projects for the good and comfort of mankind, still it can boast of considerable antiquity, being founded upwards of seven hundred and fifty years ago, and of having given a king to Scotland (for a few years), viz., John Baliol, of having produced the founder of Baliol College, Oxford, and lastly, of being at one time the residence of the Duke of Gloucester, who afterwards became Richard III., so that it is rich in historical associations.

Moralists and divines have stated that we should occasionally examine ourselves, and cast a glance back and compare ourselves now with the past, to see if we are retrograding, stationary, or improving, as there is no standing still in the laws of nature, and if such were wise and good in either of these senses, it surely should be so in our profession also, and considering the rapid strides some of the medical sciences are making, it is the more necessary. This is also beneficial to prevent us getting too much into a narrow and routine groove, and, perhaps, we are too apt to settle or degenerate into it too easily, if we do not take sufficient care; therefore, our experience is not of so much use to us if we do not carefully observe, note, record and compare phenomena of disease, types, diatheses, new diseases or modifications of old, or special diseases of modern life, and afterwards generalize from the same. It is thus that experience helps us, and assists in eliminating error, so that we are not blindfolding ourselves by virtue of our experience and practice in the mere names.

In casting a retrospective glance at some things in my own practice, I will say a few words, first, on some of the so-called old-fashioned therapeutic remedies in vogue thirty or twenty-five years ago, which were beginning to lose their reputation when I was a medical student, and soon afterwards out of repute and fashion; secondly, on some of the newer forms, aids and remedies in treatment; and lastly, on some of the more common diseases I have met with in general practice.

VENESECTION was just losing its hold and influence on the professional mind when I was a student, and although it was formerly used too largely and indiscriminately in nearly all cases, and thus carried to an excess, still there can be little doubt that lately we have probably gone to the other extreme, and not used it in suitable cases—such as in some sthenic inflammatory diseases attacking specially strong people in the country—and when judiciously and early used in proper cases it would, in my opinion, be a means of lessening severe inflammation, averting organic disease and destruction of delicate texture, and sometimes of even saving life directly. In all probability it will soon, in a modified form, come more or less into fashion again, and may be used in acute inflammations in healthy and strong people, and for diminishing arterial tension and allied disorders. The last time I practised it (about 20 years ago) was for a case of severe puerperal convulsions in a woman whom I had not seen till then, and as they were so frequent and severe—threatening death—whenever the patient was not kept under chloroform, and no time for other suitable remedies to take effect, she was bled, and the convulsions ceased entirely and immediately, and she made a good recovery. This may not be owing to *post hoc, propter hoc,* but it looks uncommonly like it. Of course more recent means, such as pilocarpine, etc., would be used to effect the same purpose; and perhaps, in some cases, better and more suitable by acting on the secretory and excretory organs thoroughly.

BLISTERS are much less used of late than they were when I began practice, and I think I have not used them latterly one-tenth as frequently as I did at first, when I was taught to employ them in pneumonia, pleurisy, some congestive cerebral affections, spinal irritation, and some joint affections. In many cases, no doubt, they were dearly purchased for the good they effected; in other cases they undoubtedly did good, and were derivative; but, like venesection, they were, I believe, too much and indiscriminately employed—too frequently in pneumonia and pleurisy especially; but, fortunately, we know the physiological and pathological conditions of these diseases better now, and do not look on them so much and treat them as separate "entities," to have them eradicated by "heroic" means. For instance, as with pneumonia especially—stimulating and strengthening the heart, and keeping up the system, and generally favourable surrounding conditions, the pneumonia, if simple and single, or uncomplicated with cardiac disease, typhoid fever, or other zymotic disease, or any organic disease, or diabetes mellitus, or delirium tremens, etc., in most cases simple and single pneumonia, if not complicated with any of the aforesaid, will recover better, according to my experience, without blistering, and we look on it now immediately as a manageable disease under the above-named limits.

With regard to blisters in pleurisy, once so much employed for promoting absorption as well as for relieving the pain, we now know that when effusion has taken place largely into the pleural sac, and threatening life or gradual exhaustion, and no absorption commencing, instead of tampering with blisters, we may have recourse to aspiration, and relief may thus be obtained at once by drawing off the liquid, but usually not effectually and permanently in all cases, as there is sometimes fresh serum rapidly secreted; or when it has become purulent,—therefore we make a free incision into the pleural cavity in severe cases, and insert a drainage tube; and this is the quickest, best, and most permanent, and no blister is required; and the present practice is much more successful in saving life and impairment of lung tissue than the old one of calomel and opium, and free and repeated blistering. Nevertheless, in a certain number of cases at the very commencement of pleurisy (and a great variety of functional complaints), a sharp counter-irritant, of the nature of a blister, is simply invaluable, combined with the internal administration of opium in one or other of its many forms, and carefully given (undoubtedly if caught in its initiatory or primary stage), the complaint may often be stopped.

CUPPING.—Cupping has also to a great extent fallen into disrepute as a counter-irritant and derivative means, and in the early years of my practice I used both wet and dry cupping, to a small extent beneficially, I thought, in suitable cases; but of late years I have used it very little indeed. The natural and simple explanation of this is that the substitutes employed for cupping (either dry or wet) afford better results in all ways. Of late I have used bromide of potassium, or iodide of potassium, belladonna, opium, aconite, etc., according to the nature of the case, for relieving and quieting, where formerly I should have used other means and cupping externally.

LEECHING.—Leeching is now also less practised, both in frequency and quantity of blood extraction, than formerly, because one of the chief medical doctrines of the last twenty-five or thirty years is "conservation of the vital fluid;" therefore we have practised more and more on these lines, hence the diminution in my practice of late, as regards leeching, not being a quarter as much as twenty years ago.

Even in peritonitis and enteritis we now know (more certainly than formerly) that opium not only relieves the pain but actually lessens the congestion of these structures, so that leeching in those severe diseases was, and is, quite secondary to opium, which is still the *sine quâ non*. After the acute stage is over I now keep the patients suffering from peritonitis and enteritis longer in bed and at perfect rest than formerly, and more perfect and continuous hot applications than in the leeching days, and on graduated small doses of opium for some considerable time, and so frequently in this way prevent a relapse, than I did fifteen or twenty years ago; and thus I believe of late, as concerns these two diseases, we are more successful in saving life, and therefore improved in our practice as compared with the past.

Passing on to ANTIPHLOGISTIC REMEDIES AND REGIMEN.—The old combination of calomel and opium, or large doses of antimony with or without bleeding, were chiefly resorted to in acute diseases or inflammations, and very low diet or nearly to starving were much in vogue in fevers, etc., thirty or twenty-five years ago, previous to the impressions caused by Drs Todd and Bennett's practice and writings, when acute diseases were then looked on as lowered vitality, and required stimulating and supporting treatment; but, fortunately, that view has been modified by our improved pathology and treatment; and now the person is treated, and not the disease specially, and how the disease affects him particularly rather than the particular disease by name.

Any one who will impartially and intelligently compare the diet of the sick of the present day with what it was thirty years ago, cannot but be struck with the great and important fact that a material change has been made; and the object now is to fit the diet to the capacity of the sick person,—no matter what it is called—antiphlogistic or any other name—the principle must be always the same. No doubt this means of treatment might be useful for two or three days at the outset in strong men suffering from acute sthenic inflammation, but now it is not adopted in a routine fashion, but modified and rendered suitable for each person according to circumstances. Soon after I came here I attended a case of pneumonia in an adult that had been treated with calomel and opium for some weeks according to the old method, and he was badly salivated, and the pneumonia had become chronic, and consolidation of lung was complete; but under nutritive and supporting treatment, digitalis, ammonia, cinchona, etc., he soon recovered, and absorption eventually became complete.

We must give our forefathers credit for being more observant than we are as regards so-called vital symptoms, as we rely now more, perhaps sometimes too much, on our more precise instruments for showing physical signs, and not so much on vital phenomena, so that we have lately become greater materialists in this respect; but after examination of the patient's symptoms, and physical signs being noted and compared, it is well to have a good look at the patient's face and expression in an acute case, and observe what it teaches and indicates in addition to the signs and symptoms, and it shows pretty well how the patient is bearing the illness. I rarely have resorted, the last fifteen years or so, to the strictly so-called antiphlogistic treatment and regimen, except for a day or two at the commencement, in an acute inflammatory affection in a very strong person in the country, so as to lessen plethora or tension — either nervous or arterial. No doubt abstinence for a very short time in some suitable cases was very beneficial rather than merely changing the diet, and giving medicines to allay the symptoms, etc.; and a lesson may be taken from the lower animals, thus, *e.g.*, — A pug dog, affected with too voracious an appetite, and having taken his meals too hurriedly, that he has always become surfeited about every ten days, and nearly to the day regularly all his life, he has had a sick fit and dislike to food, and keeps in his basket generally all that day, and never appears on the scene as a rule; and thus he has rested his overloaded and overworked stomach and digestive organs, and next day after this "fast" he is all right and as brisk as possible, and having a capital appetite for the next nine or ten days. I have watched and noted this fact for twelve or thirteen years, and merely mention this circumstance to observe that if only our bon-vivant and gourmand patients practised a little after this fashion occasionally, it would be highly beneficial and more salutary than having recourse to medicines, and keeping on the old dietetic line.

Passing on to ALCOHOL.—This is a delicate and difficult subject to allude to in connexion with practice, and within the last 25 years I have observed considerable fluctuations in the wave of Alcohol as a therapeutic means—when the reaction came from the depressing antiphlogistic treatment to the stimulating and strengthening modes of treatment referred to in the last paragraph. Undoubtedly it was used 25 years ago too largely and indiscriminately in disease, although there can be no doubt that it is a very important medicinal agent in the treatment of exhausted conditions, in the advanced stages of fevers and adynamic states, and we have no other therapeutic agent that can exactly take its place, both as a medicine as well as a food in adynamic states, and in the last stages of fever, etc. At the time I have named (I believe) it was probably administered too freely and loosely in disease; but now we know a little more precisely its actions and effects, and what quantity will saturate the blood, viz., one ounce and a half of *pure alcohol* in 24 hours is the amount of *blood saturation*, and this corresponds or is equivalent to about three or four glasses of wine in the day, and that more than that amount if long continued (thus exceeding the amount of blood saturation) will be thrown out or exerted on some special organ, such as the liver, kidneys, etc., and will lead ultimately to disorder and disease of the organ selected. I now prescribe it more accurately and carefully than I did formerly, with regard to the kind of alcohol, the quantity, frequency, etc., and directions when to leave it off; and as it is an important therapeutic means in severe cases, I have more closely watched its effects of late, as in acute febrile diseases with cardiac failure threatening. When agreeing and benefiting, the temperature begins to fall a little, and so we watch and regulate accordingly. I have used alcohol in small and regulated doses a good deal in the advanced stages of typhoid fever, or other febrile, inflammatory, and adynamic conditions with great benefit and with increasing confidence in it, more particularly in the adult, and very sparingly in children, as the latter are relatively much more susceptible of it; and this susceptibility usually diminishes with age, so that I have found it a greater help and better therapeutic and dietetic means for middle and specially old life rather than in the young, although when carefully given even to infants in suitable cases it often saves life, and no medicine probably has such a marked and striking effect.

I never knew a case of subsequent continued intemperance, or of alcoholism arise from, or be owing to its being previously administered medicinally, and if either of the victims of these states ascribed their liking and craving for it from its medical administration, and dated their intemperance to have begun then, I should fear they were, more or less, private drinkers previously, and so untruthful and unreliable in their statements that when they reach this stage we all know how demoralized they become. I trust you will not consider it presumption on my part, but in alluding to this matter I cannot resist expressing my own opinion, from careful and matured consideration, and so far as I am able to judge, I affirm that a most gross slander has been cast upon the profession in this particular matter. Judging from my own practice, the craving for alcohol is frequently acquired, but the tendency to it, or, speaking medically, the predisposing cause is oftener inherited; and alcoholism, but specially dipsomania, is chiefly hereditary, and seems a moral and physical disease, and is nearly incurable except by absolute abstention from alcohol in any form. I have observed that many of the hereditary and related alcoholics die about the same premature age, and often from the same changes produced in the same organs, liver, kidneys, lungs, heart, or brain, as the case may be. It is lamentable that one of the most useful remedial agents we possess should be also so deleterious and demoralizing when abused and taken in excess, and an important factor then in producing degeneration of tissue, organic disease, insanity, and premature death in a medical point of view, and in a philanthropic aspect, debasing, demoralizing, and contributing largely to pauperism and crime, so that we should do all in our power to prevent its injurious influences in the above-named respects. I have mentioned impressions formed in the space of five and twenty years; is it too much to look forward and anticipate what our impressions may be twenty-five years hence if living? Surely we may hope that the Legislature will come to the rescue by the well-directed advice of the profession. I have observed that alcohol should be taken very sparingly if at all in some renal affections; and in health that it should only be taken regularly in very limited quantities, always within the amount of blood saturation, and only at meal times, and none of the "pick me ups" or doses usually called "nips."

BROMIDES OF POTASSIUM AND AMMONIUM.—Of late years I have used the bromides of potassium and ammonium much more frequently than formerly for various disorders, and in larger doses than I did previously, and more of late in irritable states of digestion, sickness, nausea, and irritation of bowels and consequent relaxation; and in some of these states bromide of potassium, either single or in combination with bismuth or belladonna, seemed more efficacious than the old form of astringents, etc. Probably no medicine is given in anomalous states more than this, and so abused and disappointing when not exercising some influence for good.

IODIDE OF POTASSIUM.—I have also used more largely of late than I formerly did, and relied more on it in certain forms and causes of paralysis and in syphilis, and administer it now in larger doses, than I did in the earlier years of my practice.

MERCURY is one of the old and still reliable remedies, and in secondary, if not in primary syphilis, in regulated and small doses, the bichloride of mercury I have found very beneficial, either by itself or sometimes with iodide of potassium, and I have not observed any injurious effects from the same.

Mercurial vapour baths I have had less experience of, but I have seen them do good, only I think they are less applicable or convenient, but, probably, quite as reliable as the bichloride or iodide internally; and syphilis is a disease that gives an impression and character to all the textures of the body (both solid and liquid), probably for life, that it requires to be treated for many years, every now and then, either directly or for its sequelæ.

OPIUM has increased in my confidence as one of the most reliable and indispensable remedies, probably the most valuable medicinal substance in nature, and not yet supplanted by anything.

Now, I will say a few words with reference to some of the newer remedies, and recent means introduced as aids to diagnosis and treatment, since I entered the profession, and which, with our advancing physiology and pathology, have rendered diagnosis and treatment more definite and easy; and in the first place, I must express my grateful acknowledgment to the increased efficiency and carefulness of good nursing of late, as an important aid and auxiliary in carrying out professional advice and injunctions in severe cases especially, and as a means of comfort and success for the patient and medical attendant.

MICROSCOPE. — The microscope has now more general use (than in my commencing practice) for confirming diagnosis in some cases, and in eliminating sources of error in certain disorders or medico-legal investigations, but, unfortunately, in general practice it is still chiefly confined in its use to renal disorders, the urine, and some blood affections, but it will probably soon have extended use in medical practice with regard to the detection of bacilli as being causes or accompaniments of some diseases.

OPHTHALMOSCOPE.—The ophthalmoscope is of late occasionally used by the general practitioner as an aid to diagnosis in difficult and obscure cases, not ocular, but general diseases, particularly those dependent on syphilitic, renal, hepatic, gouty, or blood disorders, and some obscure cerebral diseases and tumours, etc.

CLINICAL THERMOMETER. — The thermometer is the greatest additional aid to accuracy of diagnosis in acute affections introduced during my time of practice, and probably it indicates more by itself (excepting the pulse) than any other means of diagnosis, or even in some cases by all the others taken together; but by itself it may be fallacious sometimes, and misleading, if not corroborated by other physical signs and symptoms. It is especially invaluable in the course of fevers and acute inflammatory affections, and I would specially wish to emphasize—the surpassing importance of this adjunct as a means in medical diagnosis in all cases where there is real or simulated pyrexia. The application of the thermometer is so simple, so safe, so satisfactory, and conclusive in its results, that no one who is at all concerned about his own reputation, to put it on the lowest platform, can refrain from seeing the advantages derived from its use.

The thermometer may reveal something which may be of great moment to the friends and relatives in allaying anxiety, or preparing for danger it may be, or it may indicate, as no other means could, the treatment to be adopted; thus it is accurate, comprehensive, and well defined.

A rise about or above 99°·6 F., or below 97°·2, is a sure sign of disorder.

The thermometer reveals a case of true from seeming pyrexia.

Fevers with the temperature or thermometer at 100°·5 or 101° are very mild, and this is of immense consolation to medical men and the relatives of the patient.

Fevers with the thermometer rising to 105 degrees are severe and very acute, and must be watched carefully.

Fevers with the thermometer at 106 degrees or 107 degrees, indicate immediate danger or approaching death.

The temperature in typhoid rises in the evening up to convalescence, when it falls at that time after that event.

The temperature in phthisis rises when any exacerbation of the disease is about to occur, *e.g.* hæmoptysis.

The temperature in pneumonia rises when suppuration is about to take place.

A high evening temperature indicates that convalescence is not established and recovery complete. A rise in temperature from morning till evening is not favourable; it indicates that the disease is not abating, and *vice versa.* A fall in temperature may be seen in remittent fever, in chronic wasting diseases, and in pyrexia when death is approaching. The above are the results of what I have formulated from my own experience.

(*To be continued.*)

V.—STUDY OF A FORM OF ALBUMINURIA.

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Chapter I.

Since the year 1827, when Dr Richard Bright published his "Reports of Medical Cases," and drew attention to the value of the presence of albumen in the urine as a symptom of renal disease, the subject of albuminuria has received from all classes of the medical profession a very large, and at the same time deserved share of attention.

Various views as to the pathogeny have been set forth, but all with the idea that there is renal disease existing — some morbid change in the kidney—either as the result of or as causing the albuminous urine.

Lately though, that is within the last two or three years, writers have sent to the different medical journals cases where this symptom has occurred, apparently unconnected with any morbid lesion, and have headed their papers with different names, such as—"Albuminuria of Adolescents," "Chronic Intermittent Albuminuria," "Latent Albuminuria," etc. From a study of the different reports, and from a few personal observations, this curious condition might, in some cases, be more correctly called "Post Cibal Albuminuria."

Before stating the various cases I have been enabled to collect together, it will be well to run over the more important theories as to the pathogeny of albuminuria given by the different authors, so as to see whether one or more of them can explain, in a satisfactory manner, that particular form now under consideration.

These theories are divided into two great classes: one considering the albuminous urine as the result of the renal disorder, and the other class considering it as the cause. It would seem even at first sight, from the intermittent, transient, and, above all, from the curable nature of these cases, that they at least cannot be included amongst the albuminurias due to renal disease,—that is to say, to an organic lesion of the kidney. Whether they come under the second heading, viz., albuminurias causing renal disease, is another question, and one from every point of view—diagnostic, prognostic, and therapeutic—of the utmost importance to have determined. It is with regard to the latter question that I am writing this paper.

In the year 1770 Cotugno published his observations *Dominici Cotunnii de Ischiade Nervosa Commentarius*, Viennæ, showing that dropsical persons could pass urine, which, although not blood-coloured, might coagulate on heating like white of egg. As he found a substance which gave the same reactions in the dropsical effusions which filled the different serous sacs of the body, he regarded the excretion of albuminous urine in dropsy as only a spontaneous or natural effort of the healing powers, and assumed that this was nature's way of ridding herself of the difficulty, by removing the pathological product through the kidneys.

In 1820 Blackall of Philadelphia, in his *Observations on the Nature and Cure of Dropsies, and particularly on the Coagulable part of Blood in Urine*, maintained that the changes found in the kidney were not the cause of the albuminuria, but were themselves common results of one and the same primary affection, namely, a state of general inflammation, and to this he attributed both the passage of albumen from the blood into the urine and the kidney alterations.

But it was not until a year or two later that albuminuria took its real place in symptomatology, when Dr Bright published his *Reports of Medical Cases, selected with a View of Illustrating the Symptoms and Cure of Diseases, by a reference to Morbid Anatomy*, London, 1827–31. Bright showed that certain alterations in the kidney, which had been first accurately described by him, were associated with the excretion of albuminous urine, and inferred that this albuminuria might be accepted as the sign of those pathological changes of the kidney which were besides likely to induce general dropsy.

Whether the interpretations put upon his first writings, viz., that he considered albuminuria as the indication of one particular diseased condition of the kidney, be just or not, it is clear that later on he protects himself when he writes in the *Guy's Hospital Reports* for 1840, p. 101, as follows:—"The chief motive which induced me to bring together the following cases was a wish to furnish myself with an opportunity of explaining my view on one important point connected with the disease attending albuminous urine, in reference to which I have been singularly misunderstood, and, as a necessary consequence, misrepresented by many who have both written and lectured upon this widely connected and most interesting subject. And I think it the more fitting to enter into this explanation for two reasons,—*first*, because wherever the views I have advocated have been opposed, as has in some few instances been the case, one of the chief arguments has been derived from this misrepresentation; and, *secondly*, because the erroneous view, for which I am made accountable, tends to lead both practitioners and patients to add despair to that abundant weight of anxiety with which the disease, taken in its most favourable light, is heavily laden. The misconception to which I refer is, that I maintain the occurrence of albuminous urine to be always and necessarily connected with that organic disease which in its various shapes and modifications has been so fully described. Now, the truth is that I have never written upon the subject without studiously stating the contrary opinion, and declaring that I considered the disease in its commencement entirely functional. Thus, in my first publication in the year 1827, after describing the disease of the kidney as connected with anasarca, I proceed in the following words:—'Whether the morbid structure, by which my attention was first directed to this subject, is to be considered as having in its incipient state given rise to an alteration in the secreting power, or whether the organic change be the consequence of a long continued morbid action, may admit of doubt. The more probable solution appears to be, that the altered action of the kidney is the result of the various hurtful causes influencing it through the medium of the stomach and the skin, thus deranging the healthy balance of the circulation, and producing a decidedly inflammatory state of the kidney itself; that when this continues long, the structure of the kidney becomes permanently changed, either in accordance with, and in furtherance of, that morbid action, or by a deposit which is the consequence of the morbid action, but has no share in that arrangement of the vessels on which the morbid action depends.'" Again he writes,—"From the observations of some of my professional brethren, I am led to suppose that they consider me as asserting that this description of urine exists only when organic disease has already taken place in the kidney. This, however, is by no means the view I have taken of the subject. I believe the functional disease in this, as in most other cases, precedes the structural changes;" and "I trust I shall be exonerated from the imputation of asserting that albuminous urine cannot exist without disorganization having taken place in the kidney. At the same time, it must be confessed that within a very limited time after the occurrence of the morbid condition of the urine, the disease has generally proceeded so far as to bid defiance to the best concerted measures for its removal, and has probably begun to produce a structural change in the organ."

Although Dr Bright here seeks to exonerate himself, as he says, from the accusation that he *always* considered albuminuria as dependent upon organic changes in the kidney, still his expressions were sometimes so worded that that interpretation might easily be placed upon them. At any rate, it is evident that he considered the kidney changes as the important factors in the disease he describes, and which since that epoch has borne his name.

Other writers, about the same period, took the same view as Bright as to the predominant part played by the renal lesions, viz., Christison in his "Observations on the Variety of Dropsy which depends on Diseased Kidney," and Dr James Gregory "On Diseased States of the Kidneys connected during Life with Albuminous Urine," both being papers published in the *Edinburgh Medical and Surgical Review.*

In France, Rayer especially sided with him, exposing his views in a very carefully written work, *Traité des Maladies des Reins*, Paris, 1840. This author went further than his predecessors, inasmuch as he described the renal changes as inflammatory, and he even went so far as to classify them, Bright not having expressed himself positively upon the nature of the changes which he had discovered in the kidneys.

Amongst the supporters of this—the anatomic theory—must be mentioned MM. Becquerel and Vernois, who affirm that "Toutes les fois que la présence de l'albumine dans les urines ne peut être attribuée au mélange soit du sang, soit du pus, l'albuminurie dans quelque circonstance qu'elle se montre quelle que soit la maladie aiguë ou chronique qu'elle vienne compliquer, est toujours due à l'infiltration granuleuse des cellules sécrétantes d'un certain nombre de tubuli à la destruction de ces cellules et à la transudation du serum du sang à travers les parois non organisées des tubuli."

Again M. Lécorché, in his *Traité des Maladies des Reins*, says, " L'albuminurie n'est que le symptôme d'une lésion plus ou moins prononcée des canaliculi."

In opposition to the school which considered the anatomical lesions as the basis of the disease, and of which Bright, Christison, and Rayer were pioneers, there soon arose another which considered that the real cause of the disease "consisted in some abnormal composition of the blood, or in some perverse construction of the albuminous element of blood serum." This may be described as the humoro-pathological school. Elliotson, in his "Clinical Lectures on Dropsy," *London Medical Gazette*, 1830, taking his ground upon the facts which he had met with himself, where complete recovery had taken place, both from dropsy and albuminuria, stated that these symptoms were not essentially due to changes which had already taken place in the renal organs, but that the albuminuria, the dropsy, and the kidney lesions were all and each the outward expression of a general change of the whole system.

But amongst the earliest and most distinguished partisans of this view must be cited Graves, who writes in the *London Medical Gazette*, 1831 :—"In dropsy, one perceives that there is an inclination towards a superfluous excretion of albuminous fluid throughout the body, in the kidney as well as in every other part, but since this excretion takes place in the kidneys, in the extremely fine tubes of the cortical substance, and is there mixed with urinary salts and various acids, one can hardly wonder if the albumen molecules thus shed should remain as coagula in the secreting tubes, block them up, gradually distend them, and after this way effect that obstruction of the glandular tissue to which the name of Bright's disease has been attached." Again he states, that "to me it appears that the albuminous state of the urine is the cause of Bright's disease, and not the consequence."

Prout taught that there would be excretion of albumen through the kidneys wherever that principle was rendered by any cause whatever unfit for assimilation; the alteration of the albumen being of such a nature as to render it possible for the vessels of the kidney to carry it off. He did not say what these alterations of the albumen consisted in.

Valentin (*Repertorium für Anatomie und Physiologie*, 1837) also supported this view of the question, and based his conclusions on anatomical grounds. He was the first who occupied himself with the microscopical examination of the morbid conditions found in kidneys, and as a result of his investigations, came to the conclusion that the morbid changes he found were due to a precipitation of albumen from the urine. The albuminuria, however, he considered as a symptom of a general disease, whose essential feature consisted in the excretion of an abnormal quantity of albumen from the blood, the urine in these cases being the means by which its elimination was effected.

Canstatt, in his *Traité de Pathologie*, 1845, says, "Il y a beaucoup d'arguments qui tendent à prouver que la cause de tous les symptômes dans l'albuminurie doit être cherchée dans une disposition anormale spécifique de l'albumine du sang. Cette disposition qui consiste probablement dans une qualité imparfaite de cette substance a pour effet de dérober l'albumine à sa destination assimilatrice et de la tourner vers les reins pour y être excrétée."

Amongst the later writers upon the subject of the pathogeny of albuminuria who must be classed in this school, is M. Jaccoud, who sustains the humoro-pathological theory, both in his Thèse de Paris, "Des Conditions Pathogéniquies de l'Albuminurie," 1860, and in his article on Albuminuria in the *Nouveau Dictionnaire de Médecine et de Chirurgie*. In the former he says, "L'albuminurie reconnait pour cause une déviation du type normal des movements nutritifs. Cette déviation consiste en une perturbation passagère ou durable dans les phénomènes d'assimilation et de desassimilation des matières albuminoides," and later on, in the latter named article, the professor defines his deviation from the normal type of nutrition as a defective oxidation, producing a more or less imperfect albumen, thus, "Or puisque les changements quantitatifs des matières albuminoides dans l'urine, et conséquemment dans le sang sont si rigoureusement prouvés. N'est on pas autorisé à admettre dans la constitution de ces principes des changements qualitatifs qui en altérant l'état moléculaire et les propriétés physiques de sorte que l'urine contiendra indépendamment des matières azotées ordinaires (urée, acide urique), un produit moins avancé de l'oxydation organique ; c'est à dire une albumine plus ou moins imparfaite dont les métamorphoses ont été enrayées. N'est on pas également autorisé à admettre, que si les produits quaternaires résultant de la desassimilation des tissus (créatine-creatinine, leucine, hypoxanthine, etc.), sont versés dans le sang en quantité trop considérable, le fait seul de cette proportion anormale modifiera les transformations des matières albuminoides proprements dites, et que celles-ci par leur présence dans l'urine révéleront le trouble passager ou durable de nutrition."

M. Jaccoud was the first to give a complete classification of the pathogenic conditions of albuminuria. It is as follows :—

I. Albuminuria caused by alterations in the mechanical conditions of the renal circulation.

II. Albuminuria by changes in the blood.

III. Albuminuria caused by changes in the blood combined with kidney lesions.

IV. Albuminuria caused by kidney lesions. (*Non. Dict. de Méd.*, i., Paris, 1864.)

M. Gubler, in the *Dictionnaire Encyclopédique des Sciences Médicales*, explains the presence of albumen in the urine as the result of its excess absolute or relative in the blood, supporting his theory, in part at least, upon some experiments of M. Claud Bernard. "M. Claud Bernard nous apprend que des doses égales de glycose (un principe normal par excellence), injectées dans les veines de deux chiens inégaux en taille ne rendent diabétique que le plus petit des deux, parceque chez celui-là seulement la masse du sucre versée tout à coup dans la circulation constitue un véritable excès. Mêmes résultats comparatifs chez deux chiens de même taille, dont l'un est à l'état physiologique tandis que, l'autre a subi une émission sanguine. Rien n'est donc plus légitime que de considérer un excès d'albumine dans le sang comme pouvant être le point de départ d'une irritation sécrétoire du rein avec albuminurie consécutive." He defines his meaning in the following words: "L'albuminurie reconnait pour cause déterminante habituelle, l'excès de l'albumine du sang relativement aux globules et relativement aux dépenses de l'économie en matières protéiques." But he does not give the kidney an altogether passive rôle in the production of albuminuria. The kidney is modified in such a manner as to allow the passage of the proteid substance; if it were not so, the albumen, although in excess, would remain imprisoned in the circulatory canals. This modification consists in its becoming the seat of an active congestion, and of certain parenchymatous alterations of a fugitive nature. But the presence of an excess of albumen in the blood is the point of departure. En résumé, M. Gubler says the "superalbuminose sanguine absolue ou relative appelle la modification inflammatoire des reins et détermine par l'intermédiaire de ce changement organique le passage de l'albumine dans la sécrétion urinaire."

M. Hamon, de Fresnay (*Bulletin de l'Acad. de Médecine*). According to this author "L'albuminurie n'est point une affection primitive des reins; et les altérations varieés des ces organes dépendent uniquement d'abord de leur stimulation anormale par un fluide excrémentitial modifié dans sa constitution puis ultérieurement du dépôt de l'albumine dans leur étroits canalicules."

Semmola de Naples (*Recherches sur la pathogénie et le traitement de l'albuminurie*). "La maladie de Bright doit être considerée comme le résultat d'une double série d'effets, qui succèdent à la suppression plus ou moins brusque des fonctions cutanées. La première série comprend des troubles généraux d'ordre respiratoire, qui empêchent l'oxydation complète des matériaux introduits dans l'organisme sous forme de peptones, et produisant d'un côté la diminution de l'urine, et de l'autre l'élimination de l'albumine. La seconde série est d'ordre mécanique."

Apart from these two theories, which ascribe the albuminuria as being due to either a previous alteration of the blood serum, or to an alteration in the structure of the kidneys, there are a certain number of authors, who support, in preference to either of those views, another which has been called the mechanical theory. This view has always been held sufficient to explain those cases of albuminous urine occurring in the course of diseases other than those of the kidneys,—such as heart disease, with its subsequent increase of tension in the venous system, abdominal tumours pressing on the renal veins, etc.

But lately a more extended field has been given to the mechanical causation of albuminuria, and the part it plays in the production of this symptom extended to cases of well-marked kidney alteration, where formerly no other explanation would have been deemed necessary for the presence of albumen in the urine than the alteration of the renal tubuli and glomeruli.

Usually, and until very recently, the supporters of this mechanical theory considered the increase of the blood pressure as the important factor. Thus Bartels, in Ziemsens's *Cyclopædia*, vol. xv., starting with the statement that "in every case the explanation of the excretion of albumen by the kidneys must be sought for in disturbance of the processes by which the secretion of urine itself is effected," goes on to say that the overflow of serum albumen from the bloodvessels into the renal tubes of the kidney will in every instance be proportioned, either to an existing abnormal increase of the blood pressure, or to an altered state of the walls of the vessels, or to a combination of both these causes acting together. In all cases, from those occurring temporarily in the course of acute febrile affections, to those more or less persistent, in the course of chronic interstitial nephritis, the albumen when present is due to this increased vascular pressure. In that form of albuminuria which occurs in cardiac diseases, the explanation from increased vascular tension is at first sight difficult, as in these cases of cyanotic indurated kidney, the glomeruli are found shrunken in size, and in some cases partly atrophic, instead of being distended with blood, as they would be in cases of the increased tension affecting them. So that in those cases of cardiac albuminuria, the presence of albumen cannot be ascribed to an increased tension in the vessels of the glomeruli, backward venous pressure affecting them but in a slight degree; and this is only what would be expected from physiological research, solutions injected into the renal veins reaching with very great difficulty and imperfectly the glomeruli, despite there being no valves to impede their passage.

Not only also is there no or very little increased pressure from a backward venous current, but the pathological conditions which would bring about such a general congestion of the venous system must at the same time produce a considerable diminution of the arterial tension, and any alteration of this is at first and principally felt in the vessels of the Malpighian tufts, so that the pressure, far from being augmented in these cardiac cases, is diminished. "For in them (the Malpighian bodies) the diminution of arterial pressure is felt in its full entirety, the increased venous tension only in some degree."

How then account for the presence of albumen in these cases by the theory of increased blood pressure? As before said, this seems difficult to do, and it will be seen in a moment that Professor Charcot, in a recent and exceedingly interesting study on the Pathogeny of Albuminuria, while still considering the albumen as being excreted from the glomeruli, and still giving a mechanical theory for its production, gives another and a very ingenious explanation. But Bartels, though now obliged to leave the glomeruli out of the question, still explains the transudation of albumen by increased pressure, and founds his opinion upon Cohnheim's researches upon venous congestion.

Cohnheim having shown that, following upon venous congestion, we have not merely escape of blood plasma, but actual emigration of red blood-cells through the walls of the capillaries into the surrounding tissues belonging to that particular province of which the veins are obstructed. Bartels is "altogether of the opinion that the relatively scanty albumen and blood which the urine contains in cases of heart disease with cyanosis, finds its way into this secretion, only after it has reached the renal tubules, and emanates from the capillary net-work surrounding these."

But here, in order to still keep to his theory of increased vascular pressure being the cause of the presence of albuminuria, he is obliged to have recourse to the tubuli as the seat of the passage of the albumen from the blood into the urine; whereas it would appear from the most recent works upon this subject, that it takes place exclusively by the glomeruli to the exclusion of the tubuli.

The experiments of M. Nussbaum seem to prove this clearly in the case of the frog. Injected white of egg passing freely into the urine prior to the ligature of the renal artery which supplies the glomeruli, but ceasing to pass after its ligature, the functions of the tubules remaining intact as proved by the continued excretion of urea. So that it would seem that Bartels' explanation of the presence of albuminous urine in cardiac disease, by the increased blood pressure, is not sufficient, the pressure not existing in that part of the kidney where the excretion of albumen takes place.

He explains its existence in cases of patients suffering from severe febrile disorders still by increased pressure, the elevated temperature relaxing the walls of the bloodvessels, and so making them yield more than they would otherwise do to the pressure of the blood streaming through them. The same cause, too, obtains in the simple contracted kidney, and in amyloid disease of the kidney.

In the first case of cirrhotic kidney an increased blood pressure in the Malpighian bodies exists; some of the glomeruli waste away with their attendant vessels, and thus the pressure upon the remaining ones is of necessity increased above the normal, since they have to receive the full current from a large arterial trunk, of which a number of natural branch channels are closed; the hypertrophied heart, which also accompanies these cases, aids the increased pressure in the renal arteries.

In the second case—of amyloid kidney—the same mechanism is adduced to account for the albuminuria as in that just given for the cirrhotic form. Some of the glomeruli being obstructed by the degeneration of their capillaries, and increased tension taking place in the remaining pervious ones.

M. Rüneberg, while still adhering to the mechanical theory as an explanation of the causation of albuminuria, takes an exactly opposite view to those who consider the transudation of albumen as due to increased pressure, and from the results of his own experiments he holds that a diminished pressure is the essential condition for its production. He performed his experiments by means of the intestines of recently killed dogs, sheep, and rabbits washed with water, and kept in dilute alcohol. Before being employed in his experiments they were washed with distilled water, or a dilute solution of common salt, and saturated with the experiment fluid.

The experiments gave the following results:—

1. When a fresh membrane was used, or one that had not been subjected to pressure for several hours, the relative amount of albumen in the filtrate diminished in proportion to the duration of the filtration up to a certain point, and then remained relatively constant so long as the pressure continued the same.

2. When this constant rate of filtration was reached, the amount of albumen in the filtrate diminished on increasing the pressure, and increased when the pressure was lowered.

3. The amount of albumen in the filtrate with equal pressures was considerably greater when the membrane had for some time previously been free from pressure, than when it had been long subjected to pressure.

4. Very finely divided emulsions, whose suspended particles are able to pass through the intestinal wall, present the same phenomena of filtration as albuminous solutions.

5. The relative amount of albumen in the filtrate, other conditions being the same, varies considerably, according to the nature of the albuminous fluid—that is, according to the modification of the albumen contained in it. The amount is greatest with solutions of egg-albumen, the filtrate often containing as large a quantity as the original solution; much less in solutions of serum albumen, and least of all with casein solution such as is present in cow's milk. It is also somewhat greater in solutions which have once been filtered through a membrane.

6. The rate of filtration, other conditions being the same, varies materially with the nature of the solution. In saline solutions it is much greater than in solutions of albumen, and noticeable differ-

ences obtain with different albuminous and saline solutions. Thus, for example, a solution of common salt filters much more rapidly than a solution of carbonate of soda, and if these salts be added to albuminous solutions, the common salt accelerates and the carbonate of soda diminishes the filtration rate of the albumen.

From those experiments Rüneberg maintains that—(1.) The so-called albuminous solutions are merely more or less finely divided emulsions, the albumen particles of which possess different degrees of diffusibility according to the kind of albumen present. (2.) That animal membranes change their permeability for albumen molecules with varying degrees of pressure, becoming less permeable with a high degree, and more permeable with a low degree of pressure. (3.) That where fluid is present on both sides of a membrane, and the pressure is unequal on the two sides, the difference between the two pressures produces the same effect as a unilateral pressure—that is, a diminution of the upper pressure as compared with the lower pressure increases the permeability of the membrane, and *vice versâ*. Rüneberg, "Die filtration von Eciveisslösungen durch thierische Membranen," *Arch. f. Heilk.* 1877, xviii.; "Ueber die pathogenet Bedingungen der Albuminurie," *Deut. Arch. f. Klin. Med.*, 1879, xxiii.

These views of Rüneberg seem to be corroborated by the experiments of other authors where an undoubted increase of tension was produced in the kidney, but no accompanying albuminuria, such as, for example, the ligaturing of the aorta below the renal arteries, where, as a result of the increased tension, there was an increased amount of urine, but no albumen was present; whilst temporary ligature or compression of the renal arteries or of the aorta at a point above their origin has always been found to produce albuminuria (Stokvis, Hermann, Munk). Also, what probably takes place in cholera and violent diarrhœa is regarded by Rüneberg as being in support of his theory, where there can be no question that the tension in the glomeruli is much diminished by the great loss of fluid and depressed action of the heart. Also, albuminuria only occurs in those cases of heart disease which are attended by a diminished arterial tension due to weakness of the heart after the degeneration of its muscle, and the albumen increases or diminishes with the increasing or diminishing of the power of the heart.

Conclusive as Rüneberg's experiments look in favour of an increased transudation of albumen through animal membranes under a diminished pressure, they have been severely criticised by Heidenhain in Hermann's *Handbuch der Physiology*, 1880. He shows that Rüneberg estimated only the percentage of albumen in the filtrate, forgetting that with an increased pressure not only albumen passed through, but a very large quantity of water; and thus, that though the *percentage* of albumen was less than that which occurred under a low pressure, the absolute amount which passed through the membrane was greater. With increased pressure both more albumen and more water are filtered, but the albumen stream increases more slowly than the water stream. Also, the increased permeability to water and albumen, which Rüneberg observed in animal membranes after pressure had been withdrawn for some time from them, is not noticed in the living kidney. For, after the renal artery is re-opened, the glomeruli are at first impermeable to water, the secretion is arrested, and may remain so for three-quarters of an hour. When re-established, the secretion gradually increases in amount, of course only up to a certain extent. In the filtration experiments, on the other hand, the amount of filtrate is greatest at the outset, and gradually diminishes. There is therefore a fundamental difference between the physical experiment and the physiological process.

But now we come to a theory propounded by M. le Professeur Charcot and M. Heidenhain, who, while still maintaining that the presence of albumen in the urine can be perfectly explained by a mechanical action, leaves on one side the question of increased or diminished pressure as being unimportant, and brings in as all powerful the question of altered velocity in the blood-current, holding that albumen only appears in the urine when, from some cause or other, there is a slowing of that current. In his "Leçons sur les Conditions Pathogéniques de l'Albuminurie (*Progrès Médical*, 1881) he says, "Ainsi, Messieurs, dans tous ces cas de troubles de la circulation générale ou locale, qui déterminent l'albuminurie, ce n'est, je le répète, ni l'augmentation ni la diminution de la pression sanguine intra glomérulaire qu'il faut incriminer, c'est le ralentissement du courant sanguin, et partant le séjour prolongé d'un sang peu oxygéné dans les capillaires rénaux. Nous retrouvons donc ici ces conditions d'anoxhémie des cellules épithéliales du glomérule, que nous avons fait valoir à propos de la physiologie comme étant très défavorable à la sécrétion de l'eau urinaire. Or ce sont les mêmes conditions qui président à la sécrétion de l'albumine, et cette circonstance explique ce fait remarquable, que dans l'albuminurie lié aux troubles de la circulation les urines sont rare en même temps qu'elles sont albumineuses."

M. Charcot ascribes all the different forms of albuminurie met with to this cause, "Il ne serait pas difficile de vous montrer en m'appuyant sur un grand nombre d'exemples, que les albuminuries, soit fonctionelles et transitoires, soit relevant d'une lesion organique du rein, et par conséquent plus ou moins persistantes, peuvent être interprétées suivant la théorie que j'ai essayé de mettre en lumière."

Professor Charcot in his paper adduces many arguments in favour of this view, both from experiment and from what is met with in disease. But some idea of the extreme difficulty of deciding upon the pathogeny of albuminuria may be gained when two authors, and both so well known as are M. Charcot and M. Bartels, bring forth in support of their respective views the same clinical cases of chronic interstitial nephritis, the one ascribing the presence of albumen in this disease to an increased velocity and tension of the blood-current, and the other making it due to a slowing of the blood. Thus M. Bartels says, "The albuminuria in all cases of contracted kidney (cirrhosis of kidney) is solely due to increase of blood pressure in the Malpighian bodies. In such cases a larger or smaller portion of the glomeruli, together with their appendages, waste away as the process of contraction advances. But the pressure of the blood upon the vessels that remain must of necessity exceed what is normal, since these have to receive the full current from a large arterial trunk, of which a number of natural branches or channels are closed. The filtration through the glomeruli being conducted under an *accelerated* blood-current, and under increased pressure, the rapidity of secretion is proportioned to both these,—the fluid filtered through Bowman's capsules under pressure at its back drives that which is before it through the renal tubules into the excretory channels in a *shorter* than ordinary period." Whilst M. Charcot, though admitting that in interstitial nephritis there is an apparently increased velocity and tension, says that it is only so in appearance,—"Il y a lieu à ce point de vue de distinguer dans un rein atteint de cette sorte de néphrite. 1. Des glomérules absolument sains ainsi que les tubes contournés qui correspondent à ces glomérules. Dans ces glomerules, les conditions mécaniques de la circulation peuvent être représentées par $+ P + V$. Les glomérules dont il s'agit d'après la théorie sécrétent l'eau urinaire en abondance, mais ne laissent pas passer l'albumine. 2. Des glomérules plus ou moins profondement altérés en voie de destruction. Ici les conditions mécaniques de la circulation, particulièrement en raison du rétrécissement, que subit le calibre des capillaires glomérulaires sont représentées par $- P - V$. Ces glomérules fournissement une faible quantité d'eau, et en même temps une certaine proportion d'albumine qui se mêle à l'urine. 3. Enfin, des glomérules complètement atrophiés et en grande partie imperméables au sang. Ceux-là sont en quelque sorte hors de cause."—$P =$ pression, $V =$ velocity.

(*To be continued.*)

VI.—ON NERVE STRETCHING FOR ANÆSTHETIC LEPROSY.

A RECORD OF 190 OPERATIONS PERFORMED IN THE KASHMIR MISSION HOSPITAL.

By ARTHUR NEVE, F.R.C.S. and L.R.C.P. Ed., Medical Missionary, C.M.S.

PROMINENT among the lesions of leprosy are the changes in the nerve trunks, cell proliferation, especially of the neurilemma, and myalin degeneration, with (generally) thickening of the nerve trunks. Doubtless it was the knowledge of this which led Dr M'Leod of Calcutta, during a visit to Edinburgh, where he had several opportunities of seeing nerve stretching performed by Mr Chiene, to suggest that the operation might be found useful in the treatment of antiseptic leprosy.

The suggestion was adopted by Dr Laurie and Mr Wallace in India, and by Dr Downes in Kashmir. Why the operation did not strike root in India it is difficult to say. The first cases published were encouraging—and the Government Leper Asylums afford plentiful opportunity for practising it—nevertheless it is now very rarely performed.

It is noteworthy that, as far as the published cases go, in no disease has nerve stretching been practised with such uniform success. Ceccherelli and Chandler have collected 34 cases, all of which were successful. These do not include the Kashmir cases, which have hitherto been only published in the Mission Reports. I now bring forward 190 cases of the operation performed by Dr Downes and myself upon 90 individuals during a period of three years. Of these 90 lepers, 84 improved and recovered sensation, 2 did not improve, and 4 died. My own experience was confined to the last 32 cases, representing 75 nerve stretchings, of which all but one improved. Of these latter cases more details will be found further on.

In most of the lepers who come to us for treatment, anæsthesia is the most prominent, and often the only symptoms of the disease. This differs somewhat from the form met with in the plains, where mutilating leprosy is common. It is quite usual for the anæsthesia to extend over the foot and anterior surface of the leg while there are no tubercles, ulcers, or other signs of leprosy, unless perhaps some hardly perceptible thickening of the skin of the brow or knuckles. It is rare to find more advanced anæsthesia without correspondingly marked lesions of the skin or atrophy of fingers or toes. Around the anæsthetic parts hyperæsthesia exists, which is commonly a sign of advancing disease. The neurotic affection never, in my experience, extends to the trunk, unless it be merely to a few patches of skin otherwise diseased.

The last 75 cases include one in which merely a few patches on the limbs of irregular distribution were affected; in all the other cases there was a definite area affected, corresponding to the distribution of some particular nerve. Of these operations 61 were on the sciatic nerve, 7 on the ulnar, 5 on the median, and 2 on the musculo-spiral. The operations fairly represent the proportion of cases or degree to which different parts were affected. Thus it is most common to find anæsthesia of the feet and anterior aspect of the legs, in many cases the little finger is anæsthetic, and in a few the palm of the hand and the other fingers.

The operation of nerve stretching is of the simplest kind, no dissection is required. Midway between the ischial tuberosity and the trochanter of the femur a vertical incision is made, beginning at the lower edge of the gluteal maximus. The incision should be about 1 to 1½ inches long, and should be made at once through the fascia propria. The forefinger passed under the biceps will, with little practice, at once recognise the sciatic nerve, which should be separated with the finger from its connexions, drawn out and stretched. I invariably jerk the leg off the table, using a force of about 25 to 30 lbs., never more than the latter. I have never found it necessary to ligature a single bleeding-point, sometimes there is scarcely enough blood to moisten the lips of the wound. The wound should be carefully pressed below to extrude any air, and be closely sutured. Our practice is to operate under the spray, and dress with iodoform and gauze. In all recent cases the dressing has been left to the third or fifth day, when the wound has been found nearly or quite healed.

From the third to the sixth day after the operation improvement is usually noticed. The restoration of sensation is centrifugal and gradual. If the sciatic nerve has been stretched improvement will first be noted in the back of the leg, down to the ankles, then on the anterior aspect, then on the sole of the foot, and lastly on the dorsum of the foot and toes. It may be three weeks before the restoration of sensation is complete, and sometimes it never becomes entirely so.

Coincident with increasing sensation the whole nutrition of the limb increases. There is a tendency to healing of ulcers and disappearance of tubercles. At this period no medicine is usually given, so that the operation only can be credited with the change. It may, however, embrace a larger area than that supplied by the nerve stretched. In two cases in which but one leg was operated on, the opposite limb improved, but to a lesser degree. In other three patients this has not been the case.

In no case has stretching of the sciatic nerve produced general or remote symptoms. This does not bear out the theory of those who regard the action of nerve stretching as reflex, acting on both spinal cord and medulla (Dr Ceccherelli, *Lo Sperimentale*). In the upper limb I have never seen any improvement beyond the immediate area of the nerve stretched. To the ulnar or median I only apply a force of 4 to 8 lbs. Improvement has been most rapid and most marked where most strain has been applied during the operation, and the few cases of non-improvement which have come under my personal observation have been all attributable to insufficient stretching.

By the third week the improvement can be gauged, but more may follow. On the other hand it may retrograde. This has not occurred in any case remaining in our leper asylum for treatment. I have, however, seen two patients who returned, stating that about four months after the operation the anæsthesia recurred. On one of these I reoperated with good result. Recurrence I take to be rare. I have had many cases under my care for more than a year, and others have been seen so long after operations, in all of which improvement of sensation had been permanent and of nutrition progressive.

I am investigating the mechanism of this operation. It is sufficient to say here that the usual explanation appears to me sound, that the benefit is due to the breaking down of adhesions in and around the nerve-sheaths, and to the straightening of the nerve-tubules. What part vaso-motor paralysis and increased vascularity may take in the other local improvement I am not competent to judge.

There must always be some risk of injuring the nerves, which in leprosy are weaker than normal. Probably 30 lbs. would be always a safe maximum (Marshall, *Bradshaw Lectures*). A less force than this will jerk any man's leg from the table. I have twice seen the ulnar broken, once by myself. Perhaps not absolutely snapped right across, but a long loop was pulled into the wound without any feeling of elasticity. In neither of these was there any bad result. Within a few days sensation was quite restored.[1] With due precautions this operation would appear to be as nearly absolutely safe as any cutting operation can be.

In none of the last 75 operations has there been any inflammation worth recording, nor suppuration. In 50 per cent. immediate union of the wound has been obtained. No pain is ever complained of. Within a few days the patients are always walking about. Normal sensation is recovered by 75 per cent. of the cases recently operated upon. In most of the remainder sensation was general, though below normal. In a few the feet remained almost entirely anæsthetic. One man alone received no benefit, in whom an acute exacerbation of the disease almost proved fatal, and counteracted any good of the operation. I have no doubt that though the sphere of this operation is limited, it has yet a great future before it; and that soon as the certain benefits it bestows become more widely known, it will be as much sought after by the sufferers in India as it is now by the poor lepers of Kashmir.

VII.—CASE OF PLACENTA PRÆVIA, WITH FIBROID OF THE UTERUS: TURNING: PROBABLE RUPTURE OF UTERUS: PERITONITIS AND DEATH.

By William W. Millard, M.D., Dunbar.

(*Read before the Edinburgh Obstetrical Society, 9th July* 1884.)

On 31st October 1882, I was sent for to see Mrs L., ætat. 37, who was in labour, and had had severe hæmorrhage. As I had twice previously attended her, each time having placenta prævia, I immediately made an examination, and found about 2 or 3 inches of the placental edge quite free at the almost dilated os.

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[1] Recently in excising the elbow-joint I severed the ulnar nerve. The ends were united with catgut. At the time of the first dressing, *i.e.* on the third day, sensation was found quite good. What is the explanation? Can there have been primary union, or were these results due to collateral innervation, as by the median anastomosis discovered by M. Verchere, or how?

Her previous history was the following:—In February 1881, I attended her in her eighth confinement. She then had placenta prævia and a great deal of ante-partum hæmorrhage. I delivered her then, by turning, with ease, Dr Napier kindly assisting me. Whilst emptying the uterus of blood clots, I discovered then an interstitial fibroid tumour on the right, and somewhat to the back of the uterus, and low down near to the neck of the uterus. Dr Napier also examined the patient, and agreed in the diagnosis. So far as I could determine from the relative positions of the placenta before delivery and the fibroid, I think the placenta had been attached to the uterine surface of the tumour.

In October of the same year (1881), I again attended Mrs L., when she had very severe and sudden ante-partum hæmorrhage, so that she was quite blanched with the loss of blood. There was again placenta prævia, but as the child was only between the fifth and sixth months, I delivered her very easily by turning. From her previous confinement she had made an excellent recovery, but from this occurring so soon after (only about 8 months), and from the great loss of blood, she recovered very slowly and was anæmic, and suffered from menorrhagia for some weeks, in fact, until she became pregnant.

However, about thirteen months after, *e.g.*, in October 1882, I attended her for the third time and her tenth confinement. Knowing I should require to turn, I sent for Dr Napier, who kindly assisted me. As I have previously said, the edge of the placenta was presenting, the head was not coming well down, and the pains were weak. I decided on turning, and the patient being put under chloroform, this was commenced. The abdominal walls and walls of the uterus were found to be excessively thin, so much so that it was quite easy to take hold of an arm or a leg, and to feel distinctly the fingers and toes through the abdominal walls. She was soon delivered, the child being dead; there was very little post-partum hæmorrhage, but the uterus did not contract well. The fibroid tumour was there confirming our previous diagnosis, and seemed about the size of an orange. So far as one could judge, the placenta was, I think, attached in this position again, *e.g.*, over the position of the fibroid.

She recovered from the chloroform quite well, and had no sickness, and her pulse being about 70. But she complained of a severe pain on the left side of the abdomen, between the iliac and hypogastric regions. This pain she had complained of during labour and before the turning took place. When left at 5 A.M., her pulse and temp. were about normal. She was seen again about 12 A.M., when the pain was very severe; temp. 101°, pulse 145. Half grain doses of opium were given every three hours, and a large poultice applied over the belly. When seen at 7 P.M., the pulse was down to 100, and temp. about 99°·5, and the pain was not nearly so bad. The lochial discharge was at first coming away quite freely, but stopped early the next morning. In the night they came to tell me how she was; and the pain being worse, 1 grain doses of opium were ordered every three hours, and another large poultice with mustard to be applied. The opium always relieved the pain.

Next day I saw her about 10.30 A.M., when, except for the pain, she said she was feeling very well, but there was evident peritonitis, the abdomen being much distended and painful. Turpentine stupes were applied, and the opium continued with. Feeling almost certain my patient would die very soon, I asked Dr Napier to go with me and see her about 2 P.M., but, unfortunately, when we reached the house, two miles away, she had just died.

I could not obtain a post-mortem examination so as to certify the natural cause of death. But I think one or two remarks may be justifiable on the case:—1st, Placenta prævia occurring three times in succession, in conjunction with the fibroid tumour, seem to point to the presence of the fibroid being the chief cause of the placental detachment, especially as the placenta seemed to be attached over the surface of the fibroid.

2nd, The excessively thin uterine and abdominal walls, almost like paper, and subsequent peritonitis to delivery, point, I think, to some tear having taken place in the uterine walls, and probably draining of lochial discharge into the abdominal cavity, setting up thus the peritonitis.

3rd, It is questionable whether the pain complained of in the side previous to delivery did not point to some tear in the uterine walls even then, *i.e.*, previous to delivery, for the position of the pain remained the same, though it was greatly intensified.

VIII.—SOME CASES OF CLINICAL AND PATHOLOGICAL INTEREST IN THE BUCHANAN WARD, UNDER PROFESSOR SIMPSON, 1883-4.

By J. W. BALLANTYNE, M.B., C.M., Buchanan Scholar.

(*Read before the Edinburgh Obstetrical Society, 9th July* 1884.)

BEFORE proceeding to the consideration of some cases of special clinical and pathological importance which have been treated in the Buchanan Ward during the past ten months, it may be not uninteresting to pass in review the antiseptic methods and preparations which have been employed during the above-mentioned period.

The ward having been closed during the month of August and the first half of September 1883, was reopened on the 15th of the latter month, at which date also I entered on my duties as non-resident assistant under Professor Simpson. The antiseptic agent at that time in use, both for the major and minor gynæcological operations, as well as for the purposes of vaginal irrigation, was carbolic acid in its various forms (solution, gauze). It was used at the first cases in which abdominal section was performed, the instruments and sponges being kept lying in the solutions of it (1 to 20 and 1 to 40), whilst the dressings applied to the wound were also carbolized. All these cases did well. On no occasion was the carbolized steam spray used during the operation, although in several cases it was set agoing in the room for two hours previous to the making of the first incision. About this time corrosive sublimate was brought prominently before the notice of the profession at the meeting at Freiburg in Breisgau, where the results of its use as an antiseptic in obstetric practice were recorded by many able observers, among whom may be mentioned Kehrer, Prochownick, Hegar, Schatz, Fraenkel, and Badlehner. These gynæcologists have practically tested the results at which Koch arrived from laboratory experiments, and are unanimous in their testimony as to the powerful antiseptic properties of the perchloride of mercury. But although German observers have thus given a great impetus to the popularization of the employment of this preparation, it is to France that we are indebted for first demonstrating its properties and showing how these properties might be put to good account. As far back as 1874, Davaine made a communication to the Société de Biologie at Paris on the subject of the properties of corrosive sublimate, and six years later the same observer gave to the world the full results of his investigations on its antiseptic action on microbes. As an immediate result of these experiments, Tarnier adopted it at the Maternité at Paris, and spoke strongly in its favour at the International Medical Congress held at London in 1881. The form in which Tarnier used it was that known as Van Swieten's solution. In 1881, also, Schede employed it in surgery. In the meantime Koch was carrying on numerous experiments at Berlin, which led him to the conclusion that perchloride of mercury was the most powerful antiseptic agent known, a solution of 1 of the salt in 333,000 parts of water arresting the development of spores. The solutions which are actually in use are much stronger than this, 1 in 4000 or 1 in 2000 having been found very suitable for practical purposes. Professor Simpson, therefore, determined to adopt the corrosive sublimate in the Buchanan Ward; and accordingly, in last November, carbolic acid was in great measure abandoned, and the mercurial solution used in its stead. At first we employed a spirituous solution of the corrosive sublimate (1 in 20), adding 1 drachm of this liquid to 12 pints of water, in order to give an antiseptic solution of nearly 1 in 2000. But it was soon found that, for hospital practice at least, it was preferable to have the solution ready made of the strength required; so the laboratory henceforth supplied us with Winchester quarts containing an aqueous solution of corrosive sublimate (1 in 1000), to which we had only to add equal parts of warm water, and we were at once in possession of an antiseptic solution of the required strength (1 in 2000). Since this gave a colourless solution with which accidents might easily have occurred, 1 or 2 drachms of methyl-orange were added, in order to colour it pale yellow, and so render it less liable to be mistaken for water. This solution, then, was used in the ovariotomies and other cases of abdominal section as well as for minor gynæcological operations, such as removal of polypi, division of the lips of the cervix for dysmenorrhœa, amputation of the cervix, etc. The cases of abdominal section have not been sufficiently numerous in order to enable us to draw any conclusions—for or against—the use of this antiseptic; still it is a striking fact, that we have had two deaths after ovariotomy during this session, and in both these cases corrosive sublimate was the antiseptic employed. In neither of these cases, unfortunately, was a post-mortem examination permitted, the patients dying on the seventh and eleventh days respectively, with symptoms pointing strongly to peritonitis. Still, as has been already stated, it would be obviously most unfair to draw any conclusions from two cases alone. There are, however, certain disadvantages which the sublimate solution undoubtedly possesses, and which interfere greatly with its usefulness, especially in operations where the peritoneum is involved. One great inconvenience certainly is the action which the mercurial solution has upon metallic instruments, for one hour's exposure to such a solution is quite sufficient to coat the instruments with a grayish deposit which can only be removed with great trouble. This disadvantage might be greatly lessened by using, as some have advised, a weaker solution for the instruments—say, 1 in 10,000—or it might be altogether overcome by having special instruments made to be used with this preparation; but then the question of expense comes to the front, and is not to be disregarded, especially in a public hospital, where the yearly expenditure on instruments is a not inconsiderable item. Another disadvantage of this solution is its action upon sponges, which it stiffens and renders of a dark colour. Thirdly, it has been alleged that it affects the hands of the operator and his assistants, causing in some persons a considerable degree of erythema and cutaneous irritation; but this inconvenience was not specially noted in the Buchanan Ward, neither in the abdominal cases nor in the cases where the solution was used for the purposes of vaginal irrigation, and where the nurses would very quickly have complained had any such effect been very obvious. Fourthly, there is a serious objection of which we must take account, and that is the fact that several cases of mercurial poisoning have resulted from the use of the perchloride of mercury solution. Stadfeld of Copenhagen and Stenger of Manheim have reported some such cases, and in the Edinburgh Royal Infirmary at least one such case has occurred, not in the Buchanan Ward, it is true, but in a medical ward where a patient with empyema was in the habit of having the pleural cavity washed out twice daily with a solution of 1 in 2000. On the other hand, the sublimate solution has many advantages, for it is cheap, odourless, and is a powerful antiseptic and disinfectant, at the same time that it acts by coagulating albumen, to which last named property I attribute a great importance in the special class of cases to which I shall immediately call attention. So great was the effect that the sublimate had on the instruments and sponges, that in the last few abdominal cases we have returned to carbolic acid again. But there is one kind of case in which corrosive sublimate has proved of great service, in cases of pelvic abscess, namely. Three such cases have been treated in the ward, one of which is well worthy of a little consideration. The patient, a married woman, 25 years of age, was admitted to the ward on 1st February 1884, suffering from pain in the left groin and side, and inability to straighten the left thigh. She had been confined of her first child six weeks previously; the labour had been a tedious one—so much so, that she was anæsthetized and the child delivered by means of forceps. From this confinement her present illness dated. She gave a typical history of an attack of acute pelvic cellulitis, which had not yielded to treatment by blistering and internal remedies, but had gone on to pus formation. When admitted she had a very exhausted, anxious look, and lay on her right side with the left thigh strongly flexed on the abdomen. There was a distinct fulness in the left iliac region, extending along the line of Poupart's ligament, and at one point there was marked fluctuation with a surrounding area of almost bony hardness. On vaginal and bimanual examination, a large hard mass was found occupying the anterior, posterior, and left lateral part of the pelvis. The uterine fundus was found lying to the front and embedded in this mass. The diagnosis of pelvic cellulitis following labour and passing on to abscess formation was therefore made, and she was therefore put on quinine, and had poultices applied to the left iliac region. On 16th February the abscess was seen to be pointing in the left groin about 1½ inch above Poupart's ligament; Professor Simpson, therefore, aspirated here and drew off about 20 oz. of creamy pus. The temperature still remained high (103°·6), so on the following day an incision was made, and the abscess cavity more thoroughly evacuated, and then washed out with a solution of corrosive sublimate (1 in 2000), a drainage-tube inserted, and an antiseptic dressing of iodoform gauze and salicylic wool applied. The cavity was thereafter washed out twice daily with the sublimate solution, and dressed as above. The temperature, which had fallen to normal, remained so, and the purulent discharge daily decreased in amount. One day, through some mistake, there was no corrosive sublimate at hand, and I used carbolic lotion (1 to 60) in its place, with the result that the temperature rose to 100°, and that next morning it was found that there was a considerable increase in the amount of discharge. On returning to the sublimate, affairs again progressed favourably. On the 10th of March, about three weeks after the evacuation of the abscess, the discharge was hardly noticeable, and the cavity had so contracted that only a few threads of catgut could be passed into it. From this point onward the patient progressed favourably. She was well dieted, had large doses of iron and quinia, and left the Infirmary quite recovered in the first week of April. I heard of her again in May, when she was seen wheeling a perambulator containing her child, and looking well and strong. In this case the beneficial action of the corrosive sublimate was well demonstrated, especially its property of coagulating albumen, and thus rapidly diminishing the purulent discharge. The unintended experiment with carbolic acid showed clearly its inferiority to corrosive sublimate in this respect.

In the narration of the above case an incidental allusion was made to iodoform gauze as a dressing, and it may be not inopportune to consider here, shortly, the dressings which were most used in the ward during the session. Iodoform gauze was certainly the favourite. It is a most cleanly preparation, with only one drawback, namely, its powerful odour. It was much used for the purpose of plugging the vagina after operations on the cervix, when it might be employed either in the form of a kite-tail plug, or as a bag containing some other antiseptic preparations, such as salicylic silk or wool. When used in either of these two methods, it was extremely easy of introduction into the canal, and of withdrawal again when required. In ovariotomies and laparotomies iodoform gauze also formed the principal part of the dressing which was applied. The usual method in which the abdominal wound in such cases was treated was as follows:—The deep and superficial sutures having been tied, the surface of the wound was thickly dusted over with a powder made up of equal parts of iodoform and subnitrate of bismuth; a layer of protective was then placed in position; above this were laid several layers of iodoform gauze, and then two more layers of gauze with a pad of salicylic silk or wool lying between were applied, the whole forming a cushion which could be easily lifted up and replaced whenever it was considered necessary to inspect the wound. Outside all was a broad flannel binder passing round the abdomen, and being fastened at one side by means of safety pins. Unless there occurred a great deal of oozing from the wound, this dressing seldom required to be changed for several days after the operation. Recently several new dressings have come into use, such as sublimated wood-wool, and sublimated gauze and wool. The wood-wool has only been used in a few unimportant cases in the ward, when it was noted that it had the power of absorbing discharges very equally and thoroughly. Two other preparations resembling wood-wool I show to the Society, the pine-wool and cell-wool, which like wood-wool have the benefit of cheapness (1s. per lb.), but which require a more extended employment before a decided opinion can be expressed on their merits. The sublimated gauze and wool are quite new preparations, which have been made at Mr Arthur's suggestion in the following way:—The perchloride of mercury is dissolved in glycerine, and then the gauze is soaked in this mixture, wrung out, and dried. It is then compressed and made up in packets. The glycerine is used to prevent the perchloride appearing in the form of crystals; it gives the gauze a moist feeling and a sweetish taste. The sublimate gauze has not the disagreeable odour of iodoform gauze, and the sublimated wool has not the irritating effect on the nasal mucous membrane that salicylic wool has. These two preparations, therefore, deserve a fair trial. They have not yet been used in the ward, but will be at the next operation. One other antiseptic was used in the ward, but only in a few cases, and that was the 1 per cent. solution of the sulphate of copper, employed and recommended by Dr Charpentier at the Clinique d'Accouchements in Paris. But the same remarks apply to it even more strongly than to the sublimate solutions. It has a very great action on the instruments and sponges, and has a most unpleasant effect upon the hands when washed in it, especially if soap be used.

Several cases of no small clinical importance occurred in the Buchanan Ward during the past ten months, two or three of which will now be laid before the Society.

Before proceeding to narrate in detail the first and probably the most important case which we have had, a few words of introduction are necessary. In March 1879 Professor Simpson read a paper before the Edinburgh Medico-Chirurgical Society, describing a case of double oöphorectomy, or Battey's operation, which he had performed, and in the course of some comments which he then made upon the operation he threw out the following suggestion:—"Is it necessary," he said, in discussing the modes of removing the ovaries, "to cut off the ovaries after strangulating their pedicles? It would be a great comfort," he continued, "to be able to close the abdominal wound with the absolute certainty that no internal hæmorrhage could occur; and this certainty we should have if we could arrest the ovarian activity by simply cutting off the blood supply with a ligature. Experiment alone can determine what the result of such a simple application of the ligature would be; whether, for instance, it might give rise to a gangrenous or inflammatory condition, such as we see occasionally in ovarian cystomata, where the pedicle had become twisted, and such as might introduce an element of danger; or whether, on the other hand, the capillary circulation might not so far keep up the vitality of the organ that some of the ovisacs would continue to grow and pass through their cyclical changes." At the London International Medical Congress in 1881, Dr Battey, in alluding to the above-mentioned suggestion, called attention to the fact that a test case had been operated on at Mount Morris, Michigan, in August 1880, by Drs Bardivell and Rumer, who record the result of the experiment in the following words:—"May now be said to be a perfect success, as the patient is perfectly comfortable and able to attend to her duties." No further case has, so far as we have been able to learn, been recorded, and it was not till last November that Professor Simpson had an opportunity of putting his own suggestion into practice. For the following notes of the patient's history I am indebted to Mr Thos. B. Darling, the clerk of the case:—M. B., a married woman, 40 years of age, was admitted to the Buchanan Ward on 4th October 1883, complaining of a down-bearing pain, with excessive red discharge from the front passage and "whites" between the monthly periods. She gave the following history of her present attack, which began two years ago:—Three days after her last confinement, which took place on 12th October 1881, she began to suffer from a gnawing pain in the left side of the pelvis, which gradually increased in severity, and on the tenth day she was in a state of high fever. The severity of the symptoms then abated somewhat, and the patient got up in a fortnight, the pain in the left side still continuing, and being now accompanied by pain in the back and a continual sense of down-bearing. The lochial discharge lasted for three weeks. Three months after this her upper and lower extremities began to swell, and a copious white discharge began to come from the vagina. The swelling of the limbs began to disappear in six months, but synchronous with its disappearance the abdomen began to become distended. She now became a confirmed invalid and consulted several medical men, one of whom diagnosed retroflexion of the uterus and inserted an instrument, which, from the patient's description, seems to have been a Hodge pessary. This instrument relieved the pain so long as it remained in position, but this it only did for three days or so at a time. Other instruments were then used, but without producing any satisfactory result. She then saw another doctor, who said she had inflammation of the ovaries in addition to the retroflexion of the uterus, and ordered her poultices to the abdomen and hot water vaginal injections. This treatment soothed the pain and somewhat checked the discharge, which had become yellowish-red in character. Having thus reduced the inflammation considerably, her medical attendant then introduced an instrument, but this, like the former ones, did not remain long in position. The pain in the back and side had been present during her whole illness, except at the menstrual periods. She came to Edinburgh in

September 1883, and was admitted into the Royal Infirmary on 4th October. Her health previous to marriage had been good; her social condition was good, and her habits temperate, save that she was in the habit of taking toddy to relieve the pain from which she suffered. Her sexual history was chiefly remarkable for the fact that the menstrual discharge began at the early age of twelve; it was of the regular twenty-eight day type, lasting from four to six days, and was not in large amount. During the course of the present illness, however, the quantity has greatly increased, and the periods have ceased to recur regularly, appearing sometimes twice a month. She suffered much from dysmenorrhœa previous to this illness; but, as has been noted, the menstrual period has since been free from pain. She has been pregnant seven times, but has never had any miscarriages; five of the labours were very prolonged, and in two of these instruments were employed. The puerperia were normal, with the exception of the last one. She nursed all her children, but none longer than eight and a half months. She has been much troubled with a frequent desire to micturate and with constipation. She has also noticed a feeling of numbness passing down the left thigh and leg. She had a highly-strung nervous system, verging on the hysterical, was small in stature, and had an anæmic appearance and an anxious expression. The mammæ were typically multiparous, as was also the abdomen. There was great pain and tenderness on palpation in the left iliac fossa. The vaginal and combined examinations revealed a multiparous canal and cervix, with an enlarged and freely movable uterine fundus lying sharply retroflexed. On making the bimanual examination combined with the introduction of the sound, the uterus was found to measure three and a half inches; it was sharply retroflexed, and lying behind it in the pouch of Douglas was a rounded, very painful body, about the size of a walnut, which could only with great care be differentiated from the uterine fundus. In the left fornix another small, somewhat rounded, and very tender body was palpated. The diagnosis of retroflexion of an enlarged uterus with ovarian congestion and prolapse was therefore made. On admission she was first treated with the hot water vaginal douche night and morning, and a glycerine plug was inserted into the vagina every second day, while ergot was given internally, and it was hoped that by these means the ovarian condition might be so much relieved as to admit of the introduction of a carefully adapted pessary. These means failed, however, as did packing the vagina tightly with cotton wool alone. Professor Simpson therefore determined to open the abdominal cavity, in the hope of being able thus to relieve the patient's sufferings in a radical manner. Accordingly, on 27th November, the patient was anæsthetized, and an incision made in the middle line as in ovariotomy. The peritoneum was divided with great care, in order to avoid wounding the intestines.

A hand was then passed into the abdominal cavity, and the position of the uterus, lying retroflexed with the right ovary prolapsed behind it, was made out. The right ovary and the right broad ligament were then drawn up into the wound; the broad ligament was transfixed at the base of the ovary by means of a needle threaded with a double silk ligature. The ligature was then divided and tied in two portions, thus thoroughly constricting the vascular connexions of the ovary. The right ovary was then dropped back into the peritoneal cavity. It was noted to be enlarged and vascular, but not cystic. The same method of treatment was adopted with the left ovary. The peritoneum was then cleansed, and the abdominal incision closed by means of deep and superficial sutures, and dressings applied as in a case of ovariotomy. No bad symptoms followed the operation; the abdominal incision healed by first intention; the temperature only twice rose to 100° F., averaged 99°·2 for the first three days after the operation, and 98°·8 for the next three, becoming thereafter normal; while the pulse was throughout fairly good, averaging from 75 to 85. She had in three weeks completely recovered from the effects of the operation. No pelvic pain or uneasiness followed, and at what should have been the next monthly period (in December) no red discharge appeared, but a copious yellow offensive one, which was treated by means of carbolized vaginal douches. From that day to this, as far as we can learn, and we have no reason to doubt the woman's statement, not a drop of blood has passed from the vagina, neither at the menstrual epochs nor in the intervals. It should be added that as she was still anæmic she was ordered iron and quinia in the form of the citrate. She left the Infirmary on 10th January for her home in the north of England, at which time the uterus was found to be more nearly normal in size, and to be lying anteverted in the pelvis. The ovary was no longer palpated behind the uterus. She stated that she had not felt so well for several years. During the months of April and May, while staying at her own home, she seems to have had an attack of pelvic peritonitis, for, on returning to Edinburgh in June, it was found that although the uterus was still normal in position, there was considerable matting together of the tissues around it. This was treated by means of hot douches and glycerine plugs, and the patient again left for home on 9th July feeling very much better. No blood has passed from the vagina since the operation; but a copious whitish-yellow discharge still continues.

The case which has just been narrated is full of interesting and perplexing physiological and pathological questions. Why should a simple ligaturing of the ovarian blood-supply suffice to occasion a speedy, premature, and absolutely complete cessation of the menstrual flow, when removal of both ovaries, nay, even removal of ovaries and Fallopian tubes likewise, has often failed to bring about this consummation? What has been the nature of the change which has taken place in the ovaries thus cut off from their blood-supply? Have graafian follicles still been developing and bursting, or have the ovaries become transformed into connective tissue? What has been the relation between the appearance of the copious, at first offensive, leucorrhœal discharge and the disappearance of the menstrual flow? Why has the uterus remained in a normal position of anteversion ever since the operation? All these and other cognate physiological and pathological problems can only be solved by patient, careful, and laborious experimental investigations upon the lower animals, combined with an extended observation of operations of this nature performed upon the human female. There is very little yet known about the physiology and pathology of the ovaries. This case, however, seems to point to the conclusion that simple ligaturing of the ovarian blood-supply is a safer and more effectual method of bringing about a premature menopause than oöphorectomy or Battey's operation, properly so-called.

The next case which we shall record was one of hæmato-salpinx, or distended Fallopian tube, in which Lawson Tait's operation was performed. The patient, a married woman, 40 years of age, was admitted into the Buchanan Ward on 20th April 1884. She complained of pain in the left groin and in the back, increased at the monthly periods, and of a profuse menstrual discharge with "whites." She has been ill for two years, the attack commencing at that time with severe pain in the left side of the pelvis accompanied by nausea and vomiting. She began to have an increased discharge at the monthly periods, with a thick and viscid yellowish-white leucorrhœal discharge between times. The pain, menorrhagia, and intermenstrual discharges have continued in a varying degree up to the present date. Various internal remedies were tried before she was admitted to the ward. Although the present illness, therefore, might be said only to date back for two years, still she has never had good health since the birth of her first child fourteen years ago. Her third confinement, ten years ago, was characterized by the appearance, after its completion, of a pain in the left side, with a slight amount of menorrhagia and leucorrhœa. After her fifth and last labour, seven years ago, all these symptoms became intensified, and have kept on getting worse up to the commencement of the present illness. The pain in the side and back is markedly increased at the menstrual periods, and persists throughout the duration of the flow. All her labours were normal so far as she knows. She frequently suffered from headaches and had often symptoms of dyspepsia. The physical examination revealed the following facts:—She was of medium height, fairly well nourished; the mammæ were multiparous; on palpation of the abdomen there was pain on pressure, and a feeling of resistance in both iliac regions, but especially in the right; the percussion note was dull in the right iliac and hypogastric regions. On vaginal and bimanual examination the vagina and the cervix were found to be multiparous in character, a tense rounded mass was found occupying the anterior and right lateral fornices, while a smaller hard body was found lying in the posterior fornix; this latter body moved distinctly with the cervix uteri. The combined examination revealed a tense obscurely fluctuating mass, about the size of a five months' pregnant uterus, lying to the front and right side of the body of the uterus, which was pushed backwards by it. This large body moves with the cervix, but the movement seems to be indirectly communicated. The sound passed in up to the 2½ inch knob in a backward direction, and with the sound in the uterine cavity the tumour could be moved about in all directions without affecting the position of the sound. The diagnosis of dilated and twisted right Fallopian tube, either hydro- or hæmato-salpinx, was accordingly made, and Professor Simpson determined to perform Lawson Tait's operation for removal of the Fallopian tube. On 4th June, therefore, the patient was anæsthetized and the abdomen opened as in ovariotomy. Upon dividing the peritoneum the wall of the cyst was seen, and the needle of the aspirator was thrust through it into the cyst cavity. Only about half an ounce of yellowish serous fluid passed through the tube, which became immediately blocked, and the cause of the blocking was found to be the nature of the cyst contents, which were thick and tenacious. The aspirator was then withdrawn and the opening in the cyst enlarged, its margins being caught by means of Keith's forceps. The incision in the peritoneum was also prolonged, and sponges were placed around the opening into the cyst to prevent the escape of its thick contents into the abdominal cavity. Partly by gentle pressure, and partly by passing small sponges on fixed handles into the cyst cavity, all its contents were removed. On passing the hand around the tumour, it was found to be due to dilatation of the right Fallopian tube, the uterus was displaced backwards, and the dilated tube occupied the anterior and right portions of the pelvis, extending upwards also into the abdomen. Several adhesions which bound the tube to the omentum and to the anterior abdominal wall were ligatured and divided. The cyst was then drawn out through the abdominal incision, the pedicle was transfixed by means of a double silk ligature and firmly tied on both sides, it was then dropped back into the peritoneal cavity, and the peritoneal toilette was completed. The incision was closed by means of deep silk and superficial horse-hair sutures, and the wound dressed in the usual way. No bad symptoms followed the operation. The temperature rose once as high as 101° F., but as a rule averaged 99°·2. The stitches were removed in a week, and the patient is now (9th July) convalescent and is going to leave the ward on 12th July. The tumour, on examination, was found to be the right Fallopian tube in a state of dilatation. It was about the size of a child's head, and the cyst wall varied in thickness from $\frac{1}{16}$ to

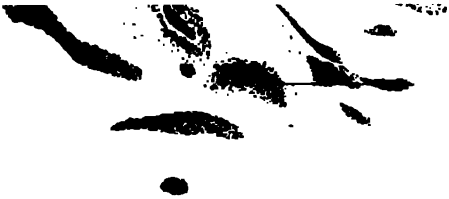
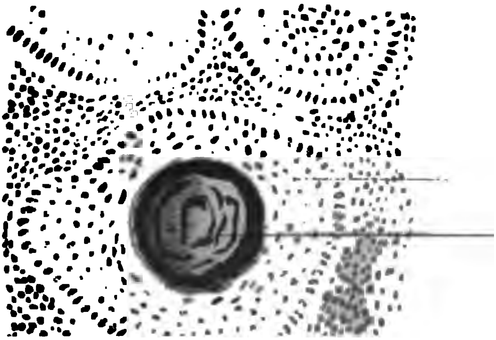


FIG. 1.

Section of wall of dilated Fallopian tube, from a case o
Hæmatosalpinx; stained picro-carmine. × $\frac{50}{1}$



¼ inch. On its inner surface was a smooth, pale brown coating, rent at several places, and showing the darker areolar tissue below. Small blood extravasations were seen at several points. The contents were made up of a greenish-yellow fluid in small amount, with a large number of flocculent yellowish curdy masses in it. On microscopical examination large numbers of blood corpuscles (some fully formed, others broken down), were found surrounded by large quantities of fibrin. Hæmatoidin crystals were also seen, and much granular detritus. The microscopic examination of the wall of the tube shows multiple hæmorrhages between the layers of the muscular wall, with some atrophy of the muscular elements (*v.* Fig. 1).

This was a typical case of the operation which Lawson Tait has done so much to introduce and render one of the most successful in all gynæcology. It has sometimes been called Lawson Tait's operation, but that operator himself simply terms it "removal of the uterine appendages."

In this case the operation presented no difficulties, with the exception of some little trouble which was experienced in emptying the cavity and preventing the escape of its contents into the abdomen; the recovery was uninterrupted, and time will now tell whether the patient has been relieved of her symptoms or not. One menstrual period has been passed since the operation; at that time there was a certain amount of pain in the left side, but no menstrual discharge appeared.

To some other cases of interest we can only give the briefest notice. One large uterine myoma was removed by laparotomy along with the uterus, ovaries, and Fallopian tubes. The pedicle, which was a very broad one, was treated extra-peritoneally, being constricted by Lawson Tait's clamp and the elastic ligature. Persulphate of iron was used for dusting on the stump, and acted extremely well, keeping the tissues quite dry and firm. The result was complete cure.

In another case a carcinomatous cervix was removed by means of the chain écraseur. The patient was a married woman, 26 years of age, and a multipara. She complained of a discharge of blood of a slightly offensive odour from the vagina, and of general weakness, and had been ill for ten months. The cervix uteri was larger than normal, somewhat flattened out, rough and nodulated in consistence. The posterior lip seemed hypertrophied, but the margin of the anterior lip was thinned out, sharp, and hardened in consistence. The cervix was removed on 1st December 1883, and the patient left the hospital in a fortnight. Since that time she has been frequently seen. There has been no return of the symptoms, she has menstruated regularly, and the surface of the amputated cervix is quite normal in consistence. On microscopic examination of the posterior lip of the cervix, there is a great increase in the connective tissue elements near the surface; the arteries are all in the condition known as arteritis obliterans; further from the surface there is an increase in the gland ducts and acini, giving the section the appearance of an adenoma. A section of the thinned out margin of the anterior lip of the cervix shows the malignant nature of the process extremely well. The epithelium on the surface is much increased, is actively proliferating, and sending down into the subjacent tissue offshoots of epithelial elements. This is therefore an undoubted case of epithelioma, in which seven months after operation there has been no return of the disease.

Professor Simpson, at a former meeting of this Society, stated that he had a case of tumour of the labium in an old woman of 74, in which the diagnosis between lupus and epithelioma was doubtful. Microscopic sections have now been made, which demonstrate that the growth was epitheliomatous in its nature. The epithelial cell nests are particularly well shown (*v.* Fig. 2), as are the sudoriparous glands, in which the epithelium is in an active state of proliferation. It is therefore a matter of probability that the epithelioma may have had its origin in the sweat glands. The growth was removed on the 20th of December 1883, and the patient has not since returned.

The last case which we shall allude to was one of what may be termed recurrent fibroid of the cervix uteri, which had been removed three times, first in May 1882 by Dr Hall Davis, again in April 1883 by Drs Barbour and Smart, and again in November 1883 by Professor Simpson. The tumour removed on the last occasion was much softer in consistence. We have examined microscopically sections of the tumours removed on the last two occasions, and the growth seems to be a mixture of spindle cells and non-striped muscle fibres. The spindle cell elements run in columns in the myomatous tissue. On comparing the section (Fig. 3) taken from the tumour removed in April 1883 with that (Fig. 4) made from the one removed seven months later, we observe a marked increase in the sarcomatous cells, with an apparent diminution in the muscular fibres. I heard from the patient a week ago, when she said she was again coming into the ward, so the probability is that the tumour has again recurred. The question of the total extirpation of the uterus was considered on the occasion of the last removal of the growth, but Professor Simpson did not consider the case a suitable one.

During the winter, hydrastis, a remedy much recommended in cases of carcinoma cervicis by Prochownick, has been employed, and certainly acts in a beneficial way by checking the discharge. So far, however, it has not been proved to have any effect on the cancer growth itself.

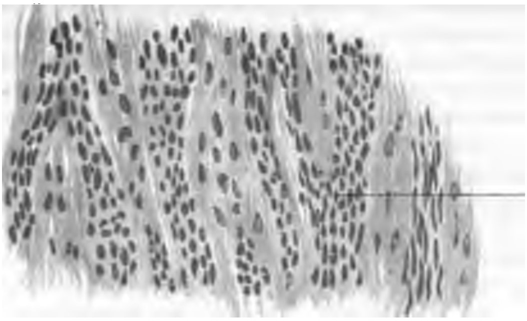


FIG. 3.

Section of recurrent fibroid of cervix uteri, removed April 1883; stained logwood, × $\frac{450}{1}$

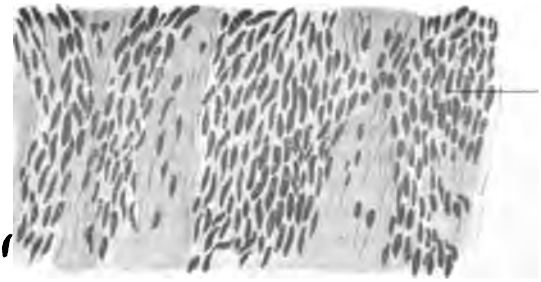


FIG. 4.

Section of a similar tumour removed from same place in November 1883; stained logwood, × $\frac{450}{1}$

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Part Second.

REVIEWS.

Tumours of the Bladder: their Nature, Symptoms, and Surgical Treatment. By Sir Henry Thompson, F.R.C.S. London: J. & A. Churchill: 1884.

The main part of this book has already appeared in the Medical Journals as reports of two lectures delivered at the Royal College of Surgeons in June last. The subject is here enlarged upon, and largely illustrated by drawings and cases. The author in his first chapter deals with the question of diagnosis. He considers that tumours of the bladder are not uncommon, and that, therefore, the diagnostic signs should be familiar to all surgeons. In regard to general symptoms he gives seven points to be investigated,—frequency of micturition, pain, hæmaturia, character of the stream of urine, appearance of the urine and its deposits, pains in back, loins, etc., and lastly, signs of dropsy. The careful investigation of these points in many cases should lead to a correct diagnosis as to whether the case is one of kidney disease, calculus, cystitis, tumour, stricture, or prostatic affection. Next, physical examination may be necessary, with sound in bladder or finger in rectum. The author further recommends, where doubt still remains, digital exploration of the bladder—the method of procedure already well known in connexion with his name. In the second chapter this operation is described minutely, and also the sensations imparted to the finger by the various tumours or other pathological conditions that may be found in the bladder. In this chapter are recorded 43 cases in which the operation of digital exploration was performed, in 20 of which a tumour was found. In the remaining cases, though no tumour was found, many were benefited by bladder drainage. In one case death resulted from pyæmia. In five cases no benefit is reported—in fact, one seems to have been worse before than after the operation (case 34). It is worthy of notice that all these unsatisfactory cases occur among the later ones—those operated on in 1883 and 1884. This suggests that the operator may have exerted less care in the selection of his cases, or become more enamoured of the operation.

Chapter III. is devoted to the symptoms and characters of the different forms of tumour found in the bladder. This chapter is abundantly illustrated with excellent woodcuts and beautiful coloured plates of microscopical appearances. Unfortunately we cannot transfer these plates or even the descriptions, but as everyone is likely to possess himself of a copy of the book, such a proceeding will be unnecessary.

The fourth chapter deals with the operation for the removal of a vesical tumour. The manipulations are carefully described, the instruments delineated, and a few illustrative cases recorded in full.

As an appendix a table is given of all the cases of tumour operated on. They are 20 in all. Of these only two can be considered complete recoveries (Nos. 1 and 7). Six patients died from the operation (Nos. 3, 9, 10, 11, 13, and 18). Three more cases (Nos. 5, 6, and 8) died subsequently of return of the tumour in the bladder or from malignant disease elsewhere. Of the remaining nine cases, three have been operated on so recently that the ultimate result cannot yet be properly ascertained; the other six have benefited more or less from the operation, some considerably, but without perfect recovery. Putting these six to the two perfect cures, we have eight successful against nine fatal cases —and three still *sub judice*, one having been operated on last February for the second time. This is not, on the whole, encouraging, considering the skilled hands under which the patients were.

To the report of each case is attached a diagram showing the relative size and position of the tumour. Altogether the book is most thoroughly and completely got up, and will form a most valuable and elegant addition to every surgeon's library.

Before concluding this brief notice of a work which will be the standard reference on the subject of tumours of the bladder for many years, we must refer to an opinion expressed by Sir Henry Thompson with which we cannot agree, and we do this the more confidently that we know that many eminent surgeons differ from our author on this subject.

In the first chapter, at page 8, when referring to necessary catheterism in elderly men, Sir Henry Thompson speaks in the most hopeless terms. He says, " In all the conditions described the patient's fate is sealed," and he sees no way out of the difficulty but through an opening in the perineum. Where a septic cystitis exists, we agree that sooner or later the result is generally a fatal one. But why should every old man who requires the use of a catheter run the risk of septic cystitis? And why should Sir Henry Thompson not think that there is such a thing as prophylaxis? We know that there is such a thing as making the use of a catheter safe, and we have to thank Sir Andrew Clark for directing attention more thoroughly to the matter, though the result of his agitation has been somewhat different from what perhaps he expected. From our author's utterances here and elsewhere we would almost suppose that he knows nothing of antiseptic surgery.

Intestinal Obstruction. By HUGH OWEN THOMAS, M.R.C.S. London: H. K. Lewis: 1883.

WE have read this elaborate and exhaustive treatise with interest, care, and, we think, profit. It is written, we may say at the outset, evidently with the purpose of demonstrating that the proper method of treating all cases of obstruction, not excluding even hernia, is by starvation and opium. While we think that Mr. Thomas pushes his argument rather far,—but, of course, we may be prejudiced,—we are ready to admit that even in the present enlightened age the so-called orthodox treatment of intestinal cases is far from safe in many instances.

Mr Thomas is very severe on those who administer purgatives and enemata to cases of obstruction indiscriminately, and on those who allow food and drink to patients who are constantly vomiting. He very properly points out that what an injured bowel and irritated stomach want is rest. Surely it is only common sense to refuse food and to give opium in such cases. Who has not seen opium stop sickness and ultimately bring about an evacuation of the bowels? Opium is not a cork, nor yet a ligature tied round the gut. It does not obstruct, and, by giving rest, it enables nature to bring about a cure in many cases of obstruction.

In the matter of diet there is a point for directing attention to which once again we are indebted to Mr Thomas. Milk is not liquid but solid food. One does not wonder at patients not believing this; but medical men ought to know it. Being both solid food and very nourishing, it does not constitute a part of "starvation diet."

There are not a few points in Mr Thomas's book which we, had we space, might criticise severely, more especially at the beginning, where he mixes up typhoid fever with intestinal obstruction, and argues that what is appropriate in the one must necessarily be useful in the other. Our author may be correct as to the treatment, but we don't admit the argument. Still, on the whole, the book is well worth careful study by all, for who may not have a case of obstruction on his hands any day, and have to decide at once as to whether an enema, opium, or abdominal section should be recommended. In view of the vast importance of correctly deciding this question, we would suggest, as we have suggested elsewhere already, that a surgeon should be called to see such cases at the very beginning, as it is then that an operation, if it is to be performed at all, is most likely to be successful.

There are many remarks of our author that we would like to quote for the benefit of our readers, but we must refer them to the book itself, which, though somewhat lengthy, will repay a careful perusal. One thing about the book we don't understand. It is evidently entirely written by Mr Thomas, who uses the first person singular throughout, yet the name of Mr Rushton Parker is on the title page. We have left his name out in our heading of this notice, not seeing very well what he had to do with the production. Furthermore, every page of the book is marked "Part I.," and yet there is no reference anywhere to Part II.

Regional Surgery. Part II.: Upper Extremity and Thorax. By F. A. SOUTHAM, F.R.C.S. London: J. & A. Churchill: 1884.

THIS is a most excellent and, so far as we have examined it, reliable work. Diagnostic signs are specially described, and in several instances these are produced in the form of tables. We have no hesitation in recommending the book both to students and practitioners as valuable for reference.

The Influence of Heredity and Contagion on the Propagation of Tuberculosis, and the Prevention of Injurious Effects from Consumption of the Flesh and Milk of Tuberculous Animals. By HERR A. LYDTIN, G. FLEMING, F.R.C.V.S., and M. VAN HERTSEN. London: Baillière, Tindall, & Cox.

THIS is the translation by Dr Fleming of a report prepared for discussion at the International Veterinary Congress at Brussels in 1883.

The book opens with a preliminary history of Bovine Tuberculosis, and the report proper embraces consideration of the following three questions,—(1.) What is the influence of heredity in the propagation of tuberculosis? (2.) What is the influence of contagion on the propagation of tuberculosis? (3.) What are the preventive measures which should be had recourse to in order to arrest the injurious effects which may result from the use of the flesh and milk of tuberculous cattle?

The views entertained on these points by the authors are indicated by the resolutions which they propose the congress should adopt. These are,—(1.) Tuberculosis is a disease transmissible by heredity. (2.) It is contagious. (3.) It should be classed among the affections which should be combated by sanitary police measures. (4.) The measures to which recourse should be had are,—(*a*), compulsory notification of the cases; (*b*), compulsory public notification of affected localities; (*c*), isolation and slaughter of suspected and diseased animals; (*d*), special police *surveillance* of infected localities for one year from date of last case of disease; (*e*), disinfection of affected localities; (*f*), the flesh and viscera of an animal to be allowed for human consumption, if the disease be recognised as *only at its commencement*, the lesions merely affecting a small part of the body, without implication of the lymphatic glands, and without softening. Meat with marked tuberculous lesions to be spoiled for sale by sprinkling it with petroleum, and afterwards buried; (*g*), milk of diseased or suspected animals should not be used for consumption; that of animals suspected of contamination should only be consumed after boiling; (*h*), an indemnity to be allowed for cattle killed by order; (*i*), infractions of these measures to be punishable; (*j*), a competent service for meat inspection to be instituted in every district; (*k*), establishments specially set apart to provide milk for sick people or invalids to be under permanent control and supervision.

Our authors have prepared a very careful and complete report on this oft-debated subject. The importance of Koch's researches in regard to the etiology of tuberculosis is fully emphasized, and we cordially agree with the reporters in the high estimate which they put upon the presence of the bacillus of tubercle as pathognomonic of the disease. It is interesting to note that, quoting Semmer, they believe that tuberculosis may be developed during the embryonic period. So far as we know, no corresponding observations have been made in the human species, a fact which tends to throw considerable doubt on the direct hereditary transmission of the disease in man. If, following Virchow, heredity be defined as embracing not only the actual disease but the tendency to it, then tuberculosis may be considered as hereditary. According to Niemeyer, however, the progeny of tuberculous parents is not more liable to tuberculous disease than that of aged, debauched, or otherwise diseased ones. In these instances, a common constitutional weakness is propagated, which, owing to causes incidental to climate and civilisation, finds expression in tubercular disease.

Now that a special organism has been detected in tuberculosis, the question of its contagiousness has been revived, and apparently more widely accepted. But the existence of a specific poison in a given disease does not necessarily imply its possession of contagious properties. Dr Andrew has lately directed attention to this, and quotes ague as dependent upon a specific organism, and yet as not possessing contagious or infectious properties; and we agree with this writer that it is to this class that the tubercular variety of disease belongs. At the same time, we confess that our authors have adduced very powerful proof that, amongst the lower animals at any rate, tuberculosis possesses contagious properties.

The legislative enactments necessary to prevent the sale and consumption of the flesh and milk of tuberculous animals are very fully dwelt upon in the report. We believe that sufficient attention has not hitherto been given to this most important subject, and we hope the day is not far distant when the meat markets and dairies of our towns will be placed under such supervision as will protect the public from the great risks incidental to the use of diseased flesh and contaminated milk.

A Statistical Inquiry into the Nature and Treatment of Epilepsy. By A. HUGHES BENNETT, M.D. London: H. K. Lewis: 1884.

THIS small volume contains three papers, which have appeared previously in one or other of the medical journals. The first paper is devoted to etiology and symptomatology, and is based upon a number of unselected cases. Etiology is discussed under the two heads of predisposing and exciting causes. The method of inquiry is the ordinary statistical one of division into sex, age, occupation, and so forth. In as many as 59 per cent. there was no family history of nervous or other hereditary disorder. That the neurotic constitution should have shown itself early in life, by convulsions during dentition, in 15 per cent. of the total number is perhaps less than general opinion and observation would have reckoned. The inquiry into the exciting causes is wholly negative. The statistics of the frequency of certain well-marked symptoms are interesting, even if not of much importance. And we are somewhat surprised to learn that in epilepsia gravior there were 74·4 per cent. in which the intelligence was not seriously impaired; but of course much depends upon the author's standard and his ideas of normal variation.

The important question of the action of the bromides on epileptic attacks is dealt with in the second paper. And we are pleased to see that Dr Bennett is not amongst the unbelieving and sceptical members of the profession as regards the benefits resulting from medical treatment. The bromides in his hands have worked the marvels which they are able to do when administered with the boldness of intelligent confidence. He begins with 30 grains for an adult, and when necessary raises it by degrees to from 60 to 80 grains. He gives the drug on an empty stomach. Reason might dictate rules as to whether certain drugs should be given on an empty or partially full stomach, but it is probably the case that many grievous therapeutic disappointments result from an unwise selection in this detail, or by its being left to the whim of the patient. A dose of 20 grains to begin with to a child of ten years is surely often unnecessarily large; and the smallest efficient dose is the fundamental doctrine of intelligent therapeutics. Only in 12·1 per cent. were the attacks completely arrested during the exhibition of the bromides, while in 83·3 per cent. the attacks were diminished in number and severity, while in 4·6 per cent. there was either no improvement or the attacks became worse. When

Dr Bennett resumes his observations we hope he will extend them to other remedies, either alone or in combination, for we cannot rest satisfied with therapeutic measures which leave us with but imperfect success in 88 per cent. of cases, and we are familiar with cases where other measures have succeeded when the bromides have failed. Such an investigation approached in a like truthful and truth-seeking spirit, and conducted with as much care, and marked by as complete an absence of bias as the papers under review, would be of the greatest practical value to the profession.

The third essay is an inquiry into the effects of the prolonged administration of the bromides, and the author has satisfied himself that "in the majority of cases the physical and mental powers do not appear to be injuriously affected." We are acquainted with important investigations which have recently been made in one of the English asylums, which show that while the drug is being steadily taken in considerable doses the patients increase in weight, while the blood improves, both in its corpuscular richness and in the amount of hæmoglobin present. We think Dr Bennett has done well in bringing these essays together and presenting them to the profession in a convenient form.

A Manual of Diseases of the Ear, for the Use of Students and Practitioners of Medicine. By THOMAS BARR, M.D., Surgeon to Glasgow Hospital for Diseases of the Ear, etc., etc. Glasgow: James Maclehose & Sons, Publishers to the University, 1884, pp. 530, small octavo.

WE can heartily recommend this new work on Otology to students and practitioners of medicine, first, because we have risen from the perusal of its carefully written and for the most part correctly stated facts with benefit to ourselves; and secondly, we are of the same opinion regarding this book as H. K. in a notice of it in the *Zeitschrift für Ohrenheilkunde*, vol. xiii. No. 2, p. 222, who says:—"The book holds a happy medium between the meagre and insufficient treatises which contain the names, titles, and claims of their authors in full, but only a fraction of the subject-matter of otology, and the exhaustive and fundamental works, of which Politzer's recent book may be mentioned as one of the best representatives. Barr's manual deserves to have a large circulation, and would undoubtedly obtain it if there had not been an over-production of otological text-books during the last years. Diffusion of otological knowledge has been more extensive than production." The arrangement of the work renders the subject much clearer than we have seen it in any of the more recently published original British works. There is a complete index at the end of the work, and a list of 122 formulæ of very doubtful utility, we consider, for the general practitioner and student. There are 115 illustrations, "mostly original!" we are told in the preface, throughout the work. Neither the wood-engraving nor the printing of the cuts are satisfactory. There is a list of principal works and journals at the beginning, and a valuable table of contents. The printing and paper, with size and compactness of the volume, as well as the clear and easy style in which it is written, and the advantages we have already referred to, make it a book we have pleasure and satisfaction in reading as well as in recommending. There are errors and shortcomings, but we believe Dr Barr has conscientiously striven to lay before the student and general practitioner the proper résumé of the amount of his knowledge, and that previously written regarding diseases of the ear, or what was known to him at the time of writing. We heartily recommend Barr's *Manual on Diseases of the Ear.*

West African Hygiene ; or, Hints on the Preservation of Health and the Treatment of Tropical Diseases. By CHARLES SCOVELL GRANT, M.D., etc. Published for the Government of the Gold Coast Colony, by Edward Stanford, 55 Charing Cross, London. Second Edition. 1884.

WE can heartily recommend this little monograph to those who purpose going to a climate which is popularly regarded as one of the most trying and dangerous in the world. It is intended for non-medical readers, especially those who may be located where trained medical aid cannot readily be obtained; and from its clear and simple style, it cannot fail to be understood and to prove a boon to anyone of average intelligence. The first part is devoted to a statement of how a European ought to live in a West African climate, while the second part is devoted to a lucid description, not encumbered by technicalities, of the more common diseases prevalent in that part of the world. Treatment is considered both from a preventative and curative standpoint, and is absolutely free from ambiguity.

The Pathology, Diagnosis, and Treatment of Diseases of the Rectum and Anus. By CHARLES B. KELSEY, M.D. London: Sampson Low, Marston, Searle, & Rivington: 1884.

THIS elaborate work from the pen of a New York specialist, carefully written, including many affections more or less directly connected with the rectum, and profusely illustrated, is a valuable addition to surgical literature.

The first chapter consists of an account of the anatomy and functions of the rectum and neighbouring parts. Our author supports the now generally accepted opinion that the normal condition of the rectum is to be empty and contracted. One common evidence of this he omits to notice, namely, the distinct sensations that are felt when flatus attempts to pass from the colon per anum and is prevented. Under such circumstances the air is distinctly felt to pass, with a gurgle, through the sigmoid flexure down into the rectum, and then, when prevented from passing out by a tight contraction of the sphincter, is as distinctly felt to return to the sigmoid flexure.

Chapter II. is devoted to malformations, of which there is a description of every possible variety. The author recommends immediate operation in the perineum if possible to establish a natural anus. If this is not possible, he recommends an artificial anus to be formed, by preference at the left groin.

Chapter III. contains directions as to how to examine the rectum, and a great amount of apparatus is described and depicted. The following chapters are devoted to the diseases of the rectum, etc. Of these chapters, twelve in all, we shall not attempt to give a separate account, but will merely select one or two for comment.

In treating of rectal abscess and fistula (Chapter V.), Dr Kelsey does not, to our mind, describe sufficiently exactly the locality of these pathological conditions, more especially with regard to their relation to the levator ani. In one thing we think he is distinctly in error, at any rate he is in direct antagonism to accepted anatomical teaching in this country, when he says that deep rectal abscess (presumably so-called ischio-rectal) may be caused by rupture of the urethra.

In speaking (Chapter XII.) of the treatment of malignant stricture situated too high up for excision, Dr Kelsey recommends colotomy or colectomy in the left inguinal region. No mention is made of the operation which seems to be somewhat in favour at present, and is advocated by Banks, Lawson Tait, and others, namely, to make a small incision in the median line of the abdomen, open the peritoneum, secure the first portion of bowel that presents, and open it either at once or after adhesion of the peritoneal surfaces has taken place (according to the severity of the symptoms and urgency of the case), so as to provide a special fistula with as little immediate risk to the life of the patient as possible.

The book is filled with quotations from numerous authors, and is illustrated by drawings extracted from almost every work on the rectum. It is saved, however, from being a mere dictionary of other men's labours by numerous reports of interesting and illustrative cases.

On the whole, we can recommend Dr Kelsey's book as a valuable work for reference.

Atlas of Portraits of Diseases of the Skin. Seventeenth fasciculus. The New Sydenham Society: 1884.

PURSUING what may be termed a revised policy, the New Sydenham Society have for the last two years alternated their *Atlas of Pathology* with additional fasciculi of their *Atlas of Diseases of the Skin.* That this is a wise and politic measure there can be no doubt. Valuable as the portraiture of morbid appearances is, the busy practitioner deals more with the living than the dead, and aids to his diagnosis in a difficult skin case are really of more importance to him than graphic reproductions from the post-mortem theatre; and, besides, there are still numerous lacunæ in the *Atlas of Skin Diseases.* Apart from the strict dermatoses, plates representing the exanthemata would be much appreciated. In particular, rötheln might find a place; a couple of plates, showing the changes the eruption assumes,—how at one period it resembles measles, at a later scarlet fever,—would prove invaluable for reference. Much the same might be said of varicella. The present part consists of four figures on three sheets. An admirable representation of Pemphigus foliaceus takes up one. The flaky leaves of half-detached epidermis are excellently rendered, and the accompanying dermatitis is so expressed that little difficulty should be experienced in diagnosing an example of this rare and dangerous disease with the aid of this picture. Not less excellent is Plate XLVIII., the right-hand figure exhibiting the fungating mucous patches on the scrotum and round the anus in an aggravated case of inherited syphilis. The left, a serpiginous rash on the face of an infant, resembling closely some of the late secondary eruptions in the adult, the subject of acquired syphilis, where symmetry in expression ceases to be well marked. This last figure should be compared with that in the corresponding situation in Plate XXVIII., named by Mr Hutchinson gyrate syphilitic psoriasis, and also an example of a rare form of hereditary disease. These last two figures raise in one's mind the question, What was the date of the disease in the infecting parent? Had he or she reached the late secondary or the tertiary stage, and so induced a type of disease in the child approximating in character to what might have been expected in themselves were an eruption to manifest itself? This is one of the problems in inherited syphilis to which, so long ago as in 1865 (*Clinical Lectures and Reports of the London Hospital*), Mr Hutchinson made the following reply: "It matters little what may have been the stage of the disease in the parent, the offspring will present first symptoms of the secondary class; and only at a much later period of life those of the tertiary group." The plates are valuable as depicting forms of eruption by no means frequently met with in inherited syphilis, and thus more likely to be misunderstood. The third plate deals with a case of syphilitic tubercular lupus, a term with which we are disposed to find fault. Mr Hutchinson himself admits that lupus and syphilis are entirely distinct processes; and thus it appears a pity, even for the sake of pointing out the mimicry, to call a syphilide lupus. For the drawing itself we have nothing but praise, the colouring is perfect, and the whole aspect typical. The character the *Atlas* bears for accuracy and reliableness is fully maintained by this fasciculus.

Clinical Notes. By W. MITCHELL BANKS, F.R.C.S. Glasgow: Stephen Miller: 1884.

THOSE who are acquainted with the clever and facetious Liverpool surgeon will not be astonished to hear that the above is a very interesting, instructive, even amusing, and thoroughly readable book. We can strongly recommend it to all surgeons for a leisure hour, when they want something "light" that contains valuable information; and on account of its latter quality, we can also confidently say that no surgeon will lay the book down without feeling that the writer is a man with a considerable amount of practical common sense. In reading the book through carefully, which we did with much enjoyment, we marked many passages to annotate on. We must, however, content ourselves and our readers with only a few.

In referring to amputations, Mr Banks takes the opportunity of praising Syme's amputation. In comparing it with Pirogoff's modification, he says very appropriately that the preserving a piece of the calcaneum is of no importance; it is the skin of the heel that is wanted.

The following is, we think, sound teaching:—

"I cannot help a certain fear that surgery, in some departments, is becoming too mechanical—that too much attention is paid to the planing, screw-driving, and sawing, without any regard to the kind of wood that is being used. The *vis vitæ* of the patient is not sufficiently regarded; his real and his surgical age, his occupation, his habits of life, the state of his internal organs, do not seem to attract that amount of attention before a capital operation which they once did. But, above all, the "rising" surgeon has difficulty in appreciating with proper keenness the condition of shock resulting from serious accidents. Formerly the screams of the agonized patient compelled the surgeon to hurry; now, having only a log to deal with, he is apt to proceed calmly—too calmly. He forgets that, although the patient is silent, and is not suffering pain, he is suffering shock—that every minute of anæsthesia, every fresh incision, every lost teaspoonful of blood is steadily diminishing his chances of survival. In a thigh amputation for smash, the fact of the patient being on the table twenty minutes in one case, or three-quarters of an hour in another, makes all the difference between his crossing the bar and sticking on it."

Mr Banks has a modification of the ordinary operation for excision of the knee-joint that seems to be a decided improvement. Besides rounding the end of the femur and scooping out the head of the tibia to make the two bones fit better together, he leaves the posterior crucial ligament,—a procedure which, he points out, is comparatively simple, seeing that the ligament is attached to the tibia some distance down the posterior surface.

Whilst we are pleased to be able to agree with Mr Banks, and feel that we have learned much by the perusal of his "Notes," we cannot agree with his opinion of the operation of removal of portions of ribs in cases of empyæma. Without going into the subject, we will just say that, notwithstanding his power of taking a broad and common-sense view of most things, our author has quite misunderstood the operation. He has judged against the operation because one case on which he operated failed. He took out a portion of only one rib, and saw no result! No wonder! He should have taken portions from three, four, or five ribs, and then he would have seen the thoracic wall fall in accordingly.

For the treatment of fæcal fistula Mr Banks recommends a most ingenious and simple method of treatment. In describing the case in which he employed this method successfully, he says:—

"I introduced a thick piece of india-rubber tubing into the opening, pushing one end up the ascending bowel and the other down the descending. It was fastened by a piece of stout silk, which hung out of the opening, so that it should not become lost. It was calculated that the continuous elastic pressure of the tubing against the projecting spur or eperon would press it back, and so allow the fæces to pass round the corner, without flowing out by the artificial orifice. The tubing was kept in for a week at a time, and was inserted twice or thrice. At the end of seven weeks the patient left the Infirmary with nearly all the fæces passing by the rectum, and only a few drops of a yellowish coloured fluid exuding from the artificial opening, which was now reduced to the condition of a mere sinus. At the end of three months this completely closed. She was seen recently, the hole having been tight for a year and nine months."

He further remarks modestly, "I don't know that this is a recognised method of removing the obstruction, and, in consequence, am all the more pleased at its success, and mean to try it again on the first similar case."

In speaking about operating in cases of strangulated hernia where the gut is gangrenous, Mr Banks objects to the procedure usually recommended of dividing the constricting fibrous structure. He advises that the gangrenous bowel should simply be opened, because the living portion above will be glued by inflammatory adhesions to the ring, and by cutting the ring, the barrier formed by the adhesions between the dead mass and the peritoneum will be broken down, and the risk of septic peritonitis made almost an absolute certainty. We admit this to be a correct statement and sound reasoning in regard to cases where strangulation has lasted for some time, and where inflammation has had time to form adhesions; but in recent acute cases, where gangrene comes on in a few hours, from the tightness of the constriction, rough handling of some medical attendant, or powerful straining of the patient, we think that the operation, which Mr Banks seems to look upon as the coming operation, of cutting out a portion of the bowel completely, should be performed, and this of course can only be done after division of the constricting parts and drawing down of the gut.

In referring to the treatment of glandular abscess of the neck, Mr Banks's recommendation is:—

"The child should invariably be anæsthetized, so that a minute puncture may be steadily and quietly made in the abscess, through which a small drainage-tube should be inserted and retained in position. To insert a tube; or pass a probe through it, to within a quarter of an inch from one end, and let it impinge there against the wall of the tube, pushing this before it, then cut off the small end close up to the probe, and pull up the tube on the probe, holding it firmly between the finger and thumb. Having inserted the tube in the wound at the proper depth, pass right across it a piece of pack-thread by means of a small darning-needle. Cut a circle of adhesive plaster, and nick it round the edges to make it lie comfortably. Then cut a hole in the centre and a slit at each side. Lay it down so that the tube protrudes through the hole, and bring up the thread on each side through the slits, and tie it in front. Cut the tube short. A little absorbent cotton wadding, wrung out of a disinfectant solution, should be put on the surface and frequently changed. Thus a vent is given for the discharge, which is sucked up by the wadding, and the abscess cavity can be washed out, while the parts are not kept soddened and heated by poultices or waterproof dressings. Every two or three days the plaster is removed, and the tube replaced and shortened if necessary. When all is closed, only a white spot marks where the tube once was inserted. I was shown this little manœuvre by Mr Bickersteth many years ago, and have found it most valuable in private practice. I often show it to students, and tell them it will be far more useful to them than lucubrations on tying the innominate or performing gastrostomy."

We must now close this notice with some extracts from Mr Banks's remarks on the comparative merits of ether and chloroform as anæsthetics. He says:—

"From the teaching of Simpson I naturally imbibed an unquestioning belief in chloroform, while for six months, as a senior student, I administered it in the theatre of the Edinburgh Royal Infirmary to all Mr Syme's patients. From the latter I received only two instructions—(1) Give plenty of chloroform and plenty of air; (2) watch the breathing most jealously, and pull out the tongue at once if it is not absolutely free and full. To this day I believe that these are the golden rules. . . . .

"It may be a harsh thing to say (I have said it, however, before, and will not retract), but I cannot help thinking that most of the fatal cases result from an inability on the part of the chloroformist to appreciate the exact condition of his patient and recognise impending danger, and I adhere to the doctrine which I was first taught, that, in the fatalities which might have been avoided, a neglect of the breathing has been the main error. Of all the scores of medical students whom I have helped to educate, only a limited number seem ever to grasp this question of breathing. Times without number I have seen a house-surgeon solemnly pouring on the chloroform long after the patient's tongue had fallen back, and while for a minute or more he had not been getting into his lungs as much air as would make two good breaths. Some one has stepped forward and lugged out the tongue with a pair of forceps. Then has come such an inspiration as showed what the unfortunate man was literally dying to get could he only have spoken. During an operation of a quarter of an hour, a patient is often ten minutes on quarter rations of air—the working of his chest and belly deceiving the inexperienced administrator into the belief that his breathing is going on quite well. If you held a man's head under water till he was half drowned, and then proceeded at once to give him a considerable dose of chloroform, would you be surprised if unpleasant symptoms appeared? And yet it is considered wonderful that they should appear after he has been half choked on a table!"

Mr Banks seems to have a preference for ether. In regard to his opinion of that drug, we give two short extracts:—

"Is there then no danger with the etherized man? Undoubtedly there is; and it would be a very great thing if house-surgeons and others would bear in mind that no patient can be rendered insensible by any drug whatever without some danger. . . . .

"There is little doubt that while ordinary sensibility to pain disappears soon enough under ether, that drug takes longer than chloroform to paralyze reflex action. So much the better in one sense—the more difficult is it to paralyze the heart with it."

It is evident from these statements that Mr Banks is in favour of ether, and uses it in preference to chloroform.

What to do in Cases of Poisoning. By WILLIAM MURRELL, M.D., Lecturer on Materia Medica and Therapeutics at the Westminster Hospital. Fourth Edition. London: H. K. Lewis: 1884.

THE fact that this small volume appears again for review so soon, is proof that it has met some want in the world of books; and its success is well deserved, for, in spite of minor drawbacks, its teaching is, on the whole, sound and instructive. No doubt we must demur to the giving of ipecacuanha as an emetic in cases of poisoning by aconite or digitalis, and we think the use of artificial respiration is not likely to be much needed in poisoning by strychnia, though we are told under that head that if artificial respiration be possible it is important. In the treatment of cases of compound poisoning the author continues to repeat the same instructions under each head, *e.g.*, the advice of "what to do" in poisoning by chloral and morphia is repeated under morphia and chloral; and, indeed, the treatment of opium poisoning is repeated under morphia, and hydrocyanic acid under prussic acid. The book, however, is well up to date, directions being given of how to treat such rare cases as poisoning by kairin, resorcin, etc. The paragraph devoted to the supposed active ingredients of popular "patent preparations" is specially good, as indeed are the notices of patent preparations throughout the book.

Wharton and Stillé's Medical Jurisprudence. Fourth Edition. Edited by ROBERT AMORY, M.B., M.D., and EDWARD S. WOOD, A.M., M.D. Vol. III., *Poisons.* Philadelphia: Kay & Brother: 1884.

THE progress in our knowledge of the action of poisons upon the animal economy, and the improvements which have taken place in our analytical methods during the eleven years which have elapsed since the publication of the third edition of this work, have been very great. These advances have consequently produced an amount of new material, so large, that the editors, as they state in the preface, feel themselves bound to detach toxicology from the rest of the work, and assign to it an entire volume. Much more attention is now paid both to the physiological actions and to the specialized methods of detection of poisons than was devoted to these subjects previously, and our perusal of this volume leads us to regard it as well abreast of the latest views and discoveries in these departments. The appendix of important medico-legal cases is not the least interesting or valuable part of the work, containing as it does a succinct account of 56 cases, among which we note those of Bocarmé, la Pommerais, and Lamson, besides others of equal interest, although not of such world-wide notoriety.

Part Third.

PERISCOPE.

MONTHLY REPORT ON THE PROGRESS OF THERAPEUTICS.

By WILLIAM CRAIG, M.D., F.R.S.E., Lecturer on Materia Medica, Edinburgh School of Medicine, etc., etc.

NITRO-GLYCERINE IN THE TREATMENT OF EPILEPTIFORM TIC.—Dr James P. Bramwell, Perth, in the *British Medical Journal* for 27th September, records a case of severe epileptiform tic cured by nitro-glycerine in a patient 80 years of age. Dr Bramwell had previously prescribed bromide of potassium and croton chloral hydrate, with only partial relief. Solution of nitro-glycerine (0·1 per cent.) was given in drop doses three times a day. The effect of this was almost immediate, and in four days all morbid symptoms had gone. The patient has since been four months in perfect health, without any return of the fits.

CASCARA SAGRADA.—In the *British Medical Journal* of 4th October, I. Fletcher Horne, F.R.C.S. Ed., strongly recommends the fluid extract of Parke, Davies, & Co. in cases of constipation, "particularly those dependent on defective, perverted, or excessive secretion of the liver, combined with indigestion," and adds, "Eighteen months' further use, in several hundred cases, has fully satisfied me of the value of this therapeutic agent, and its right to a prominent position as a peculiarly suitable remedy in most cases of constipation. I have also been much pleased with its efficacy in the treatment of hæmorrhoids. By its action on the portal system its use often relieves the pain and congestion in those patients who decline surgical treatment. In several cases of hæmorrhoids following delivery the use of Cascara sagrada for a few days rapidly produced a cure. Combined with glycerine I find children take it readily; and as it produces full, easy stools, without nausea, tormina, or tenesmus, it excels castor oil, senna, and other allied laxatives, as after its use the constipation is cured and not increased."

RESORCIN IN THE TREATMENT OF INTERMITTENT FEVER.—The *Therapeutic Gazette* of September quotes from the *Med. Wochenschrift* a case recorded by Justus Andeer, showing the good effects of resorcin. "A school teacher, about 50 years of age, had for ten or fifteen years been compelled to teach and live in buildings that were situated near a cemetery. As a result of breathing the mephitic and impure atmosphere, especially before every change in the weather, he would lose all energy, become despondent and weak. Later, such symptoms as loss of appetite, chilliness, insomnia, and an oppressive feeling in the left hypochondrium, became associated with those already mentioned, and not unfrequently he was confined to his bed. The disease in this instance was not recognised by the physicians until a certain regularity became manifest as to the time of the appearance of those symptoms, then the diagnosis of intermittent fever of the quotidian type was made. Quinine, which had been given frequently and in large doses, had little more effect than to still more disturb digestion. The oppressive feeling in the hypochondriac region indicated dilatation of the stomach and enlargement of the spleen. Patient often complained of vomiting, therefore the stomach was washed out twice with a solution of glauber salt. After this he felt somewhat improved, but not until the stomach was washed out with a five per cent. and a ten per cent. solution of resorcin did the quotidian type of the disease disappear for a few weeks. All treatment had purposely been suspended, and in the course of two or three weeks the patient had a return of the fever, though not as persistent and severe as formerly. He now received during a whole week resorcin in powder and in solution in increasing doses from 1·0 to 5·0 grammes; after complete recovery, treatment was continued in small doses in wine for a few weeks. According to a despatch sent me by the patient recently, he has been and continues to be in good health, although two years have passed since he was under my care. It is worthy of notice in this case that the patient had been treated in the best hospitals and summer resorts; climate, hygiene, and therapeutics, including the sovereign quinine, had no effect at all until resorcin was employed, then his intermittent fever and all the other symptoms disappeared entirely."—*Therapeutic Gazette*, September 1884.

THE ACTION OF RESORCIN ON THE SPLEEN.—At the medical clinic of Genau, at the suggestion of Prof. Maraglinus, a number of observations were made in order to gain some information on the action of resorcin in tumours of the spleen, caused by long continued malarial poisoning. Resorcin was only given in such cases where, after repeated examinations, the tumour was found to be always of the same size. Then 2 grammes per day was given. The action of the remedy is not at all certain, even in cases that are apparently quite similar—the one case was benefited, while the other was not affected in the least. Notwithstanding all this, Queirolo comes to the conclusion that resorcin has the property to reduce infectious tumours of the spleen. This action may take place while the fever and the malarious cachexia continue—in short, it is not dependent on the infectious process (from *Deutsche Med. Zeitung*, by Queirolo).—*Therapeutic Gazette*, September 1884.

CHLORATE OF POTASH IN THE TREATMENT OF BURNS.—In the *British Medical Journal* for 11th October, Dr J. Walton Browne strongly recommends the application of a lotion of five grains of the chlorate of potash to the ounce of water. "Pieces of lint of the required size, saturated with the lotion, are applied four times a day. The lint is covered over with gutta-percha tissue or oiled silk, all dressings being retained *in situ* by a bandage."

NITRITE OF AMYL IN THE TREATMENT OF CHRONIC HEART DISEASE.—The author publishes, quite at length, the history of a series of cases, accompanied by the sphygmographic tracing of the pulse during a course of nitrite of amyl. He claims not to have noticed a single instance of benefit brought about during the dys-systolic period by the use of this drug. It did not have a tendency to stimulate the heart, and only in one single instance could he record even the slightest benefit. In healthy people the physiological action of amyl is to cause an increase in the frequency of the pulse-rate, but the author could not recognise this in his patients even when large doses had been administered (Vincenzo Patella in *Gaz. Med.*)—*Therapeutic Gazette*, August 1884.

OCCASIONAL PERISCOPE OF DERMATOLOGY.

By W. ALLAN JAMIESON, M.D., F.R.C.P., Extra Physician for Diseases of the Skin, Edinburgh Royal Infirmary; Lecturer on Diseases of the Skin, Edinburgh School of Medicine.

SKIN AFFECTIONS CONNECTED WITH DIABETES.—Kaposi has grouped the various skin affections which have been met with in association with diabetes in a series of papers in the *Wiener Medizinische Wochenschrift* for January 1884:—1. *Asteatosis* and *Anidrosis* of the skin. An abnormal dryness and exfoliative state of the general integument. This seems to be a result of deficient nutrition, and not an uniform indication of diabetes. 2. *Pruritus cutaneus* may be either universal or vulvar. The urine should be examined for sugar in all cases of cutaneous pruritus. 3. *Urticaria chronica.* In connexion with diabetes this consists of an eruption of small pimples, which are subsequently lacerated by scratching, and end in suppurating excoriations and pustules. He had never observed this except in patients reduced and debilitated, not by the glycosuria, but previous to this. 4. *Acne cachecticorum*, occupying chiefly the external surface of the extremities and the nates. 5. *Eczema* of different degrees, due to the wetting of the skin by the diabetic urine, hence confined to the genitals and their neighbourhood. 6. *Paronychia diabetica*, chiefly in the great and little toes, as most exposed to pressure from the shoes. 7. *Furunculosis* and *Anthrax*, generally during the incipient stage, and constituting, according to Seegen, one of the earliest manifestations. 8. *Gangrene*, bearing, according to most authors, a close resemblance to gangræna senilis. In brief, the morbid processes brought about are characterized by *inflammation terminating in tissue necrosis*, but with very little tendency to the formation of *inflamma tory neoplasms.* Still, when the tissues have become gradually inured to the glycosuria and the presence of the diabetic sugar throughout them, the inflammatory symptoms may terminate in tissue degeneration. And this is illustrated by 9, *Papillomatosis diabetica*, curious vegetative excrescences resembling framboesia in a Brazilian, for twenty years a diabetic, and who eventually died of diabetic coma.—*Journal of Cutaneous and Venereal Diseases*, June 1884.

UNDER the head of "Clinical Notes," Oscar Lassar of Berlin relates some curious and interesting cases:—1. *False scleroderma.* This was met with in a case of long-standing prurigo, associated with extensive and deeply infiltrated eczema. When the superficial inflammation had been cured by means of a 2 per cent. salicylic paste, hard white stripes were seen, bounded by brownish and livid-red borders, which alternated with thickened and hardened islets. These were scattered irregularly on the nates and the face. The resemblance to true scleroderma was close, and the causes induced by the pruriginous irritation were the same—congestion and inflammation, with obstruction to the flow of lymph in consequence of the enormous size of the glands. Baths, massage, compression, diaphoretics, and the treatment of the prurigo by tar produced a favourable effect. 2. *Severe urticaria.* Two cases are related of severe acute urticaria, due to no dietetic errors, and preceded by fever, which were cut short by doses of salicylate of soda. On this Lassar remarks, that "these establish the daily experience, that the salicylate of soda exerts a most beneficial effect on the most various forms of urticaria and exudative erythema." 3. *Pityriasis alba* in a boy, 13 years old, in whom large filmy flakes of epidermis were cast off over the whole body, without evoking any subjective symptoms. The desquamation was small on those parts, as the face, neck, and hands, which were regularly washed. When the parts were scraped with the curette, the bleeding corium was not exposed, thus excluding a pale psoriasis, and the condition of the accessible lymph glands proved the absence of any inflammatory irritation. The condition was not congenital, but had lasted two years. The parents and grandparents were unaffected, but one sister had a similar disease. The child was anæmic, narrow-chested, and had some spinal scoliosis. The disease most resembled a colourless pityriasis rubra. Baths, and a free inunction with a 2 per cent. salicylic vaselin salve, produced in a few weeks an almost smooth skin.—*Monatshefte für Praktische Dermatologie*, July 1884.

CHROMIDROSIS.—Balzer and Barthelemy have examined some cases of red sweat in the axillæ, and agree with Hoffmann, Pick, Eberth, and Babes, that the red perspiration is produced by the development of microbes which attach themselves to the axillary hairs, on which they form glutinous and yellowish masses. This form of coloured sweat seems to attack especially healthy persons, those of a lymphatic or arthritic diathesis, and convalescents. It appears also to favour those with red, reddish-brown, or fair hair.

This form of parasitism is common, and occurs in those who are careful as to their habits, as well as in the negligent. It is not limited to the axilla, but on scraping the epidermis of the inguinal and perineal regions, similar zoogloca are found. The hairs of these parts, and even of the beard, has been found invested with these masses. The zoogloca attach themselves first to the epidermis of the hairs, especially to eroded parts. At first the portions of the hairs which have the epidermis intact remain free, but the microbes insinuate themselves under this, break it up, and advance further. Highly magnified, chains of micrococci, round or oval, are seen, often colourless at the margin of the zoogloca, but elsewhere exhibiting a yellow, brown, or red tint. Those found in the epidermis are not all coloured red, and it is likely that microbes other than those which cause red sweat are present. As regards treatment, ether alone, of many agents tried, appeared to have a real effect, and caused the red colour to disappear from the linen in course of a few days. This improvement was maintained for a certain time, then the red sweat reappeared.—*Annales de Dermatolögie et de Syphiligraphie*, June 1884.

DERMATITIS HERPETIFORMIS.—Duhring includes under this general term cases described by various authors under different titles, as Fox's Pemphigus pruriginosus, Impetigo herpetiformis of Hebra, and the Herpes gestationis of Bulkley. Two instances are recorded, from which it appears that the disease is a polymorphic one. When severe there are marked constitutional symptoms. The lesions themselves may consist of groups of vesicles, or vesicles and blebs, or these may be combined with pustules. Other forms of primary lesion are also seen as erythematous patches and papules. The flexor surfaces of the arms and thighs are the usual localities where the disease commences, but it may become more or less universal. Periods of latency or apparent cure occur, and then there is a fresh outbreak. Very severe itching and more or less burning are constant accompaniments. Both the patients were females. In one the complaint commenced during pregnancy, but continued after her confinement, being evidently aggravated by irregular menstruation. In the other the disease bore no relation to pregnancy, and, indeed, was absent or little marked while that condition lasted. No treatment seemed to avail in one, in the other most benefit was obtained from a lotion of an alcoholic solution of coal tar. This markedly relieved the itching, which previously only became lessened when, by scratching, the vesicles had been extensively lacerated. It may be mentioned that a representation of this disease will be found on Plate XXIX. of Tilbury Fox's *Atlas*.—*Journal of Cutaneous and Venereal Diseases*, August 1884, and *Philadelphia Medical News*, July 19, 1884.

LEUCOPLAKIA BUCCALIS.—Vidal treats these white patches on the tongue with a solution of 1 in 5 of chromic acid in distilled water. The spots are touched with a camel's hair brush; in one or two minutes after the mouth is rinsed with water. This is done once a day for three or four days, then at longer intervals.—*Monatshefte für Prakt. Dermatologie*, July 1884.

ETHICS OF THE SKIN.—Under this title Mr Malcolm Morris has published a racy, clever, and amusing lecture, which, besides other things, deals with the influence the so-called æstheticism of the present day has exerted on the skin. Speaking of blindly imitating the fashion of the day, he says, "So too, though very ugly and nothing more than a copy of the wasting in consumption, is the now common practice of darkening the eye-socket to increase the apparent size of the eye. But when in addition to all these devices, a decree goes forth that powder is to be applied to the cheeks from morning to night, to the utter destruction of the complexion, it is time to speak out, and that it does so destroy it is attested at this moment by thousands of skins puckered and pitted, that, but for using powder, would have remained to this day soft as silk. The constant use of powder has precisely the same effect on the glands of perspiration as the overstraining of the voice has upon the throat of a clergyman or public speaker. With the continuous exertion to secrete moisture to lubricate the throat, the glands become exhausted, and give out so small a supply, that if speaking be persevered in, an obstinate complaint termed clergyman's sore throat is the result. So with the glands of perspiration in the face. As the powder dries up the moisture, more and more is secreted, till the glands become at last unable to fulfil the unavailing task, and shrinking, produce the little chasms that give the orange rind appearance that is but too familiar to all observant people. As on the petal of the flower, and on the wing of the butterfly, there is always a delicate down that no powder can simulate, and any excess of this is disease."—*International Health Exhibition Lectures*, 1884.

PERISCOPE OF MEDICINE, CLINICAL AND PATHOLOGICAL.

By G. A. GIBSON, M.D., and WILLIAM RUSSELL, M.D.

EXPERIMENTAL RESEARCHES ON CHRONIC ALCOHOLIC POISONING.—A long investigation into this subject has just been published by Dujardin-Beaumetz and Audigé. The animals used in this series of experiments were hogs; the pig being chosen because its digestive system most nearly resembles that of the human race, and further, because it "was the only animal that willingly consented to imbibe our alcohols." The researches were carried on by administering various forms of alcohol to the pigs in their food, and necessarily took a long time. The animals enjoyed excellent hygienic surroundings. Their food was farinaceous (except when ill from the result of the experiments, when they were temporarily put on milk diet), and was given twice a day,—at 9 A.M. and 6 P.M.

The alcohol was administered in the food at the morning meal. The various effects of alcoholic excess were observed amongst the pigs,—after the dose they were often so drunk as to be nearly choked by letting their heads fall into their troughs, and gave evidence of the effects of the spirits by staggering, temporary paralysis, and similar nervous phenomena; those taking absinthe having a strong tendency to contractures. Loss of appetite, thirst, vomiting, and diarrhœa were very frequent, as were also dyspnœa and cough. Space does not allow us to follow the authors through their interesting details, and we can only give some of the conclusions which they draw from their researches. As to the results of alcohol on the digestive system, they found that when the dose did not exceed one gramme per kilogramme of weight for each animal, there was but little inconvenience. When this amount was exceeded there was digestive mischief, and autopsies showed an abnormal redness of the stomach, with intestinal congestion, but no thickening of the visceral walls. On the liver there were no results save considerable congestion, attended by jaundice. The kidneys were fatty, but this is common in pigs, and could not be attributed to the alcohol; but the authors seem inclined to believe that a case of pyelitis which occurred was due to alcohol. Almost all the pigs had severe coughs, and on post-mortem examination there was considerable bronchial congestion. The heart was always fatty, but this is common in pigs; in two cases, however, there was atheroma of the aorta, no doubt caused by the regimen. Although nervous troubles were manifested during the time when the animals were under the influence of alcohol, no pathological results could be found after death. Turning to the effects of the different alcohols, it was observed that the crude spirits were much more deleterious than those which had been rectified. For example, "the hog to which was given the crude grain spirit succumbed to the effects of alcoholism; the animal that got the crude beet whisky, and which we slaughtered in the course of the experimentation, presented congestions of the digestive tube, of the liver, of the lungs, and atheroma of the aorta. The hog that was dosed with the impure potato spirit, and was also killed by us, had the most marked hepatic congestions." On the other hand, the purer alcohols were the cause of "few lesions, or none at all." And, lastly, absinthe and tincture of absinthe caused an interesting series of phenomena, in which contracture of the limbs and a curious hyperæsthesia of the skin were notable features.—*The Therapeutic Gazette*, 15th July and 15th August 1884.

THE PITCH OF THE PERCUSSION SOUND.—At the Massachusetts Medical Society, Huntress made a communication upon this subject. He draws attention chiefly to the difference of pitch between the percussion sound of the right and left infraclavicular regions in the healthy chest. Most authorities state the pitch to be the same on both sides in the region referred to, but Guttmann considers it to be higher on the left, and Flint on the right side. The results of observations upon 200 cases are given. The persons examined were mostly men—30 only being women; all were in good health, and between the ages of twenty and forty. All cases of deformed or unsymmetrical and of abnormally large or small thoraces were discarded. Percussion was made, with and without the pleximeter, on points equally distant from the sternum, and always at the close of a full inspiration. The cases were divided into five classes, according to the results:—

(*α*.) Those in whom no difference was found in the pitch of the two infraclavicular regions.
(*β*.) Those in whom the pitch was slightly higher on the right.
(*γ*.) Those in whom it was slightly higher on the left.
(*δ*.) Those in whom it was markedly higher on the right.
(*ε*.) Those in whom it was markedly higher on the left.

If there was any doubt as to there being a slight difference in pitch, the case was placed in class (*α*). The results obtained were as follows:—

(*α*.) No difference,	72
(*β*.) Slightly higher on right,	71
(*γ*.) Slightly higher on left,	26
(*δ*.) Markedly higher on right,	23
(*ε*.) Markedly higher on left,	8

Thus, out of 200 cases, in only 72—little more than one-third—was the pitch the same on both sides; in 94—nearly one-half—it was higher on the right; in 34 it was higher on the left. From the above experiments the following conclusions are drawn:—(*α*.) A difference in pitch—and that means a difference in intensity and quality as well—at the apex of either lung, unless decidedly marked, does not indicate disease on that side where the pitch is higher. There was a difference in nearly two-thirds of the cases. (*β*.) Although the right side is much oftener higher pitched than the left, yet in seventeen per cent. the pitch was higher on the left. It is therefore more significant to find dulness at the left apex than at the right, but this is no proof of there being disease there, as is generally taught by those who make a distinction between the two sides.—*Boston Medical and Surgical Journal,* 14th August 1884.

PERISCOPE OF GYNÆCOLOGY AND MIDWIFERY.

By J. Milne Chapman, Inverness.

Remarks upon the Surgical Anatomy of the Gravid Uterus, by William M. Polk, M.D. (*N. Y. Medical Journal,* May 3, 1884).—The above paper is of sufficient importance, in view of the advances in abdominal operations in obstetrics, to warrant the reproduction of its main features. The descriptions of the anatomical arrangements of the various structures in the non-gravid condition, which are given for the sake of contrast in the paper, will be found in the *New York Medical Journal*, vol. xxxvi.

The Uterine Artery in the Gravid Uterus at Term.—The vessel is enlarged, though relatively less so than the ovarian artery. It is less tortuous, and its attachment to the pelvic wall is loosened and in part separated, so that but a small portion near the origin remains in contact with the wall. This is readily understood when its attachment to the uterus is remembered. The effect of elevating the organ is, first, to raise all that portion of the vessel stretching from the pelvic wall to the uterus, for this runs in a loose area of connective tissue; and next, to separate a good portion of it from the wall, so that, in cases of extreme contraction of the pelvic inlet with its resulting elevation of the entire uterus, we may expect to find the vessel running from its origin directly inward and upward to reach the lateral uterine wall.

In the normal pelvis, with the gravid uterus occupying the usual position, its course, from origin to distribution, is more direct and at a much higher level than before pregnancy; but it should not be lost sight of that this level is raised and depressed along with corresponding movements of the uterus.

The level of the uterus varying even in normal cases, an exact statement of the relation of the level of the uterine artery to any one of the pelvic planes is impossible, and scarcely desirable. It is, perhaps, sufficient to remember that the higher the uterus the higher is the vessel.

The relations of the vessel to the ureter are practically the same as in the non-pregnant state, resting upon and loosely attached to it, as they cross at a point about midway between the uterus and pelvic wall. Owing to the ascent of the broad ligament and consequent obliteration of its outer border, the relations between the vessel and this border are lost, but it maintains a close relation with the base-line or inferior border passing beneath it, to reach finally within its folds the lateral border of the uterus.

In approaching the lateral aspect of the lower segment of the uterus above the pelvic brim, the vessel may be distinguished as it hangs loosely in the wide-meshed area of connective tissue, filling the interval between the cervix and the lateral pelvic wall. Finding it at its junction with the uterus just above the centre of the lateral aspect of the cervico-vaginal junction, we can easily trace it to its origin.

The Ovarian Artery in the Non-gravid Uterus, after descending across the posterior and inner angle of the iliac fossa, winding beneath the inner extremity of the sigmoid flexure on the left side and along the inner border of the cæcum on the right, crosses the pelvic brim at or in front of the bifurcation of the common iliac artery, sometimes as much as an inch to the front, and, accompanying the infundibulo-pelvic ligament in the upper border of the broad ligament, reaches the lower surface of the Fallopian tube. Passing close to the ovary, it follows the course of the tube to reach the cornu of the uterus, remaining thus after crossing the pelvic brim in the upper border of the broad ligament, its general direction within the pelvis being horizontal, but subject to the position of the fundus uteri.

The Ovarian Artery in the Gravid Uterus at Term is greatly enlarged. Descending across the posterior and inner angle of the iliac fossa as before, it approaches the pelvic brim at the bifurcation of the common iliac; thence it runs almost directly upward and slightly forward to reach the greatly elevated cornu of the uterus.

In this course it accompanies the infundibulo-pelvic ligament and tube, passing close to the ovary as in the non-pregnant condition, but the relation of the ovarian vessels to the tube and ovary has undergone one striking alteration. Before pregnancy the tube and ovary are so much larger than the calibre of the ovarian vessels that these vessels are overshadowed, but in pregnancy they are so much enlarged as to rather overshadow the tube and ovary.

Owing to the alterations in the broad ligament to be noted, it now runs in the posterior border of the triangular expansion of what was the upper border of that ligament.

The relations of the first portion of the rectum to this vessel are important in all operations upon the pregnant uterus, made from the direction of the left iliac fossa. They will be mentioned in a separate statement.

The Round Ligament in Pregnancy is greatly enlarged and much elongated. Leaving the elevated cornu where it has close relations with the ovarian vessels, it descends in the anterior fold of the triangular expansion of the broad ligament to reach the internal ring. No part of it dips below the pelvic brim. If the uterus be low in the pelvis, the ligament will rest upon the brim and the iliac vessels before entering the ring; but if the organ be well up, it is stretched to such an extent that its course may be that of a straight line from the cornu to the ring, no part of it coming in contact with the brim or the iliac vessels. The result of this stretching of the ligament is to raise the peritoneum from the face of the inner anterior angle of the iliac fossa, a matter worth remembering in operating with a view of reaching the lateral vaginal wall above the pelvic brim.

The Ureters with the Gravid Uterus at Term.—The changes in the position of these tubes, consequent upon pregnancy, have been stated in a paper read before the Obstetrical Society, and published in the *New York Medical Journal,* May 1882. Subsequent investigation has in no way altered the general conclusions then reached—namely, that at term the ureters are detached from the pelvic wall and raised above the level occupied prior to pregnancy. The extent of this ascent varies with the ascent of the uterus, consequently is dependent upon the capaciousness of the pelvis in no small degree. When we reflect upon the connexion of the posterior and lower surfaces of the bladder with the anterior vaginal wall, as well as the intimate relation existing between that canal and the ureters, and remember that the vagina is drawn up and elongated by the traction of the ascending pregnant uterus, it is evident that there must be some ascent of the postero-inferior vesical wall and corresponding elevation of the ureters. The general upward movement of the broad ligaments and elevation of the peritoneum in the paravesical fossæ and lateral fossæ of Douglas would serve to account for the change of position in that portion of the tubes behind the vagina, thus completing the reasons for the general alteration of position maintained. In connexion with this subject it is well to bear in mind the fact, pointed out by Braun, that during parturition a considerable portion of the bladder is drawn up above the pubes, causing, no doubt, a farther ascent of these tubes, so that during labour it is fair to assume that there is a time (the termination of the first stage of labour) when what we may designate as the pelvic portion of the ureter will be raised to the level of the pelvic brim throughout most if not all of its course. We find, however, the following to be the position of the ureters at term in a pelvis of normal dimensions. They cross the pelvic brim at the bifurcation of the common iliac artery, the left just behind, the right just in front of that point; they wind around the inner border of the psoas-magnus muscles, across the vessels, to strike the linea terminalis about the synchondrosis. In this course they accompany the internal iliac vessels, the right ureter being in front of these vessels, the left crossing them obliquely from behind. Reaching the linea terminalis, they leave the pelvic wall, pass beneath the broad ligament, and take a course downward, forward and somewhat inward, passing about midway between the cervico-vaginal junction and the pelvic wall, but approach very closely the antero-lateral vaginal wall, as they turn more decidedly inward on a lower plane to strike the base of the bladder three-quarters of an inch below the cervico-vaginal junction, ending finally in the bladder at a point two inches behind the spine of the pubes (the subject on the back). A line drawn from the bifurcation of the common iliac artery to the spine of the pubes corresponds in the main to the course of the ureters. From what has already been said, it is obvious that the level of the ureters at term cannot be fixed absolutely, but I believe my former statement expresses as nearly as may be the average for all normal cases, viz., with the patient on the back and assuming the anterior face of the psoas muscles as the highest level of the lateral borders of the brim, the ureters, at the bifurcation of the common iliac arteries, will be found half an inch below the brim, at the extremities of the transverse diameter one inch below, and opposite the spine of the pubes two inches below the spine, or, more properly speaking, two inches behind it.

The Broad Ligaments with the Gravid Uterus at Term.—The ascent of the uterus is such as to lift these structures out of the cavity of the true pelvis, and their outline is so altered that they become triangular instead of quadrangular. The inner border, much elongated, still reaches from the cornua to the level of the internal os. Some lessening of the intimacy of the attachment of its layers is noticed; this is specially evident in the anterior layer as it passes over the lower segment of the uterine body. The superior border, with all that portion of the peritoneum stretching between the ovarian vessels and round ligaments, is spread out at the sides of the uterus in the shape of an acute-angled triangle, with the base at the brim, and the apex at the cornua; this conformation is the result of the tension exercised by the ligaments and vessels as the uterus ascends. The inferior border or base-line, shortened by the expansion of the uterus, runs from the internal os to about the linea terminalis, thus occupying a level corresponding in the main to that formerly held by the superior border. From this it will appear that the outer border is virtually obliterated. This change is the result of the traction made upon the folds of the broad ligaments as the uterus ascends. The lines of traction run from the lateral uterine wall to the inferior and outer borders, the point of greatest tension being at all times the intersection of these two. As the inferior border ascends, the adjacent peritoneum keeps pace, the result being a constant encroachment from below upward upon the outer, until finally the greater part if not the whole of it disappears, to take its place upon the inner face of the triangular expansion of what was formerly the superior border. By lateral growth the uterus forces itself between the anterior and posterior layers of the broad ligaments, thus encroaching upon their horizontal measurement. Leaving the sides of the uterus in close apposition, they pass out to reach and form the inner face of the triangularly expanded superior border; there they separate, the one to pass forward around the round ligament, the other to pass backward around the ovarian vessels, both to become continuous with the peritoneum, forming the outer face of the triangular expansion described. The effect of the tension upon the ovarian vessels and of their alteration of position is to throw the rectum somewhat behind the line along which it usually crosses the brim to unite with the sigmoid flexure. The ascent of the lateral pouches of Douglas, and consequent ascent of the utero-sacral ligaments, serves to throw its upper portion farther back toward the central sacral line, so that at term the intestine as a whole runs nearer this line than before pregnancy. If we seize a gravid uterus at term and make traction upward, we lift the peritoneum along the face of the psoas muscles from the sacro-iliac synchondrosis to Poupart's ligament. If we make an incision parallel to Poupart's ligament about the level of the internal inguinal ring, and push the gravid uterus well over to the opposite side, we may pass from the ring to the interior of the true pelvis without touching the peritonæum, our line of approach being beneath that of the round ligament. The effect of pregnancy is, in fact, to loosen, and even diminish, the area of peritoneal attachment in the iliac fossæ, so that separation, as has been repeatedly pointed out, is a matter of ease.

STATISTICS OF OPERATIONS PERFORMED BY SCHRŒDER FOR MALIGNANT DISEASE OF THE UTERUS. Hofmeier (*Centbl. f. Gynäk.*, No. 18).—The statistics given embrace all the cases personally operated on, from 1st April 1876 to 1st Jan. 1884, with, in addition, a few operations performed under his direction by assistants. A radical operation was resorted to in 160 cases, equal to 20 per cent. of all that came under observation. Of cases where (1) the vaginal portion was the seat of disease, 42 per cent. were suitable for operation; of cervix cases (2), 20 per cent.; and of corpus cases (3), 50 per cent. In the first class of cases there were 96 amputations and 8 total extirpations; in the second, 9 amputations and 30 extirpations; and in the third, 13 abdominal supravaginal amputations and 4 total extirpations. The mortality of all cases was 31, or 19·4 per cent. The following were the proportions of the cases alive two years after operation:—After supravaginal abdominal amputation, 80 per cent.; after Freund's operation, 33 per cent.; after vaginal total extirpation, 33 per cent.; after vaginal and supravaginal amputation, 25 per cent.; after amputation with the cautery, 42 per cent.

THE ADMINISTRATION OF A SOLUTION OF SALT IN CASES OF UTERINE HÆMORRHAGE. Betz (*Centbl. f. Gynäk.*, No. 18).—Attention is drawn to the value of salt used in the above way as a ready resource in emergencies when the apparatus for transfusion is not procurable, and a case is given where it proved of great advantage. The method of administration followed was to dissolve a teaspoonful of salt in half a litre of water, and give three tablespoonfuls of the solution hot every five or ten minutes. No sickness was occasioned.

SCARLATINA PUERPERALIS. Busey (*Am. Journ. of Med. Sciences*, April 1884).—SCARLET FEVER OF THE FŒTUS IN UTERO AND OF THE MOTHER AT THE NINTH MONTH OF PREGNANCY. Leale (*Medical News* (*American*) May 31st, 1884).—The first of these articles is a very full account of a case, and a careful differential analysis between such cases and septicæmia. The second article contains, after a recital of cases, critical references to the literature of the subject and the following conclusions:—Scarlet fever may attack the fœtus in utero. The large proportion of children born with it recover. Scarlet fever of the newly born child has like manifestations as when it occurs later in life. It may attack the woman during pregnancy and also immediately after childbirth. It is exceedingly fatal to the woman during pregnancy and during parturition; but it rarely, if ever, affects the parturient woman if she has had a previous attack. Scarlet fever causes death in the parturient woman by coma, exhaustion, or by convulsions. Being a self-limited disease, it is best treated by relieving dangerous symptoms, and in accordance with the rules of hygiene. Scarlet fever only exceptionally occurs during the ages that women bear children; therefore, the proportion of those liable to contract the disease during pregnancy and childbirth must necessarily be small. Scarlet fever and septicæmia are distinct diseases, being unlike in many respects.

PERISCOPE OF OPHTHALMOLOGY.

By George A. Berry, M.B.

Intermittent Exophthalmos from Emphysema of the Orbit.—Rampoldi (*Annali di Ottalmologia*, xiii. 3 and 4) records an interesting case of exophthalmos, the recognised cause of which suggests the possibility that it may not be so uncommon as the absence of literature on the subject might lead one to suppose. The case was that of a man of 40, whose only other ailment was a chronic coryza aggravated by snuffing tobacco, and sufficient to produce some slight difficulty in breathing. A year previously he awoke one day after a prolonged sleep to find that he had double vision and swelling of the lids of the left eye. On examining himself in the looking-glass he found that the eye was prominent, and he could feel a crepitation below the fingers applied to the lids. The symptoms gradually disappeared, the means adopted by the patient to effect this being a mustard foot-bath, a blister at the back of the neck, and a bandage over the eye. After this there was no return of the swelling of the lids, but the exophthalmos and diplopia developed themselves from time to time, the determining cause being a violent sneeze or cough or blowing of the nose, actions brought about not unfrequently owing to the patient's habit of snuffing. The symptoms were occasionally also brought on by singing. In fact, every act of strong expiration was the cause of a diplopia, and was accompanied by a sensation of propulsion of the eye forwards. The patient got into the way of frequently preventing its occurrence by keeping up pressure on his eye. When first seen by Rampoldi, there was no external appearance of anything abnormal with the left eye, and only a marked intumescence of the mucous membrane of the nostril. On causing the patient to make a forcible expiration while closing his mouth and nose, the eye could be seen to be pushed forwards and outwards, and a fizzing sound heard at the same time. Three months later he took a bad cold, which after eight days was accompanied by chemosis, slight conjunctivitis, and permanent exophthalmos, evidently due to some cellulitis of the orbit. In this case, therefore, there must have been some communication, through or posterior to the ethmoid bone, between the orbit and nasal cavity, a fact which Rampoldi believes may possibly throw some light on the origin of some obscure cases of idiopathic orbital cellulitis. Cases are on record in which such a connexion has been established, and has produced the same results traumatically.

EFFECTS PRODUCED BY PARTICLES OF METAL WHICH HAVE FOUND THEIR WAY INTO THE EYE.—Leber (*Arch. f. Ophth.*, xxx. 1) has for some years been experimenting on animals, with the object of finding out to what extent the inflammation frequently following the accidental introduction of metallic particles into the eye is due to the action of the metal alone or to septic matter introduced at the same time. As far as substances which are not chemically acted upon by the fluids of the body are concerned, it has already been established beyond doubt that when followed by inflammation it is due to the co-operation of other causes. The question is more difficult in the case of iron and copper, in which we are generally uncertain as to whether the portions occupying the eye are aseptic or not, so that we are in doubt to what to ascribe the inflammation usually following their introduction. Leber's experiments have shown that in animals at least, copper, even when precautions have been taken against the simultaneous introduction of septic matter, produced under certain circumstances a purulent inflammation. They have also shown that there are remarkable differences not only between the actions of iron and copper, but also in respect to their action according to the position of the foreign body on the eye. Aseptic portions of a sewing needle introduced into the anterior chamber of a rabbit produce the following changes: slight injection round the lower border of the cornea, followed after a few days by a thin scale of yellowish exudation round the metal, no opacity of the aqueous humour or exudation beyond the immediate proximity of the foreign body. If the point of the needle comes to rest against the cornea, it gradually makes its way through it. In one case the portion of needle was removed by catching hold of its projecting end with a pair of forceps after 527 days, an operation which was succeeded by a rapid and complete cure. The effect produced by similar portions of copper is very different. If they touch the iris they produce a marked ciliary injection and great hyperæmia of the iris, followed by a purulent deposit round the metal, and occupying a great part of the anterior chamber. The cornea in front of the metal becomes more or less infiltrated and sometimes totally destroyed, which is followed by a spontaneous expulsion of the foreign body, whereupon, notwithstanding the severe inflammation, a relatively good cure may take place. This is owing to the inflammation being always confined to the anterior part of the eye, *i.e.*, to the neighbourhood of the foreign body. The second series of experiments consisted in introducing into the anterior chamber a number of fine particles of copper or iron. In the case of the copper, each particle becomes surrounded by a purulent deposit; after some time the inflammation subsided, and the particles of copper disappeared without leaving a trace. Similar experiments with very fine particles of iron produced similar results in the end, though accompanied by much less irritation. A piece of copper wire pushed through the cornea into the lens, and left with the free end in the aqueous chamber, produces hardly any irritation, owing, as Leber believes, to the dissolved particles of copper being at once taken up by the surrounding albumen before coming in contact with the vascular portions of the eye. Finally, the few observations which Leber has made of clinical cases, where he has been able to exclude septic causes, show that the oxidizable metals are capable of producing an inflammation depending on the nature of the metal as well as on the site occupied by the foreign body in the eye.

THE DYNAMIC STATE OF THE LATERAL OCULAR MUSCLES IN GIRLS FROM 5 TO 18 YEARS OF AGE.—In connexion with a somewhat extensive research into the state of refraction, visual acuity, and interpupillary distance in the girls of a school in Heidelberg, Beselin (*Arch. f. Augenh.*, xiv. 2) gives the following results with reference to the dynamic relations of the muscles:—1. The equilibrium of the lateral muscles is very frequently disturbed in all states of refraction, and this not only in adults, but also in children from the fifth year (the youngest age tested). 2. A preponderance of the externi over the interni is found in all states of refraction in more than one-third of all cases; in myopia the preponderance occurs in more than half of all cases. 3. Preponderance of the interni is found more especially in hypermetropic eyes, where it occurs in one-third of all cases. 4. Changes in the dynamic condition are frequent in young persons, and may occur in any direction. The last point was made out from examinations made at an interval of four years. Unfortunately Beselin has included both examinations at a distance and near at hand, so that the results are not quite as valuable as they might have been. The dynamic relations for a distance are probably much less dependent on the state of refraction than those for near vision.

ON THE PERCEPTION OF DIFFERENCES IN DEGREE OF ILLUMINATION.—Charpentier, in the last paper of a series of admirable investigations on subjects bearing on the fundamental principles of physiological optics, comes to the following conclusions with reference to the power of differentiating different degrees of illumination:—1. The differentiation is directly influenced by the absolute degree of illumination increasing in perfection with the illumination, so that the fraction indicating the perfection of differentiation diminishes continuously as the illumination increases, and probably never arrives at a constant quantity. 2. There is no simple law which assigns a value to this fraction; approximately it varies inversely as the square root of the absolute degree of illumination, though more rapidly when the illumination is feeble, and more slowly when strong. 3. The power of differentiation varies with the size of the objects to be distinguished, being more perfect the larger the object, so that the value of the fraction representing it diminishes continuously with the augmentation of the object. 4. This takes place until a maximum is reached, when the object is of such a size as to give a retinal image corresponding to the size of the macula lutea.—*Arch. d'Oph.*, iv., Sept.-Oct.

ON TWO RARE FORMS OF KERATITIS.—1. The first form is that known as keratitis bullosa, resulting from traumatic abrasions of the corneal epithelium. The painful and transitory attacks occurring at intervals, and sooner or later after an abrasion, are generally looked upon as purely nervous, Dr Hansen Grut (Ophth. Sect. Intern. Med. Congress, Copenhagen), who first described this curious affection, considers the attack to be always brought on by some mechanical irritation, generally the forcible rubbing of the lids to get rid of some foreign body in the eye, etc. The nerves of the epithelium remain in an unhealthy state, so that a very small trauma is sufficient to set up an attack. Sometimes, indeed not unfrequently, a true keratitis is the result, but this always assumes the bullous form. The bulla may be demonstrated by seizing hold of the anterior surface with the iris forceps; it is always extensive, sometimes covering the half of the cornea. In rare cases there is a symmetrical bullous inflammation in the other eye, although it has certainly not suffered any injury. 2. The second form of keratitis described by the same author is one of very slow progression, producing but trifling subjective symptoms, and hardly any pericorneal injection. It is a grayish infiltration, faint, and having a decidedly serpiginous tendency, advancing by throwing out "boutous," which are more saturated than the rest of the infiltration. The borders of the branches or ramifications are more saturated than their axes. There is a great tendency to repeated relapses, but the affection always remains superficial, and the iris is never involved. The origin of this disease appears to be undoubtedly mycotic.

GLAUCOMA PRODUCED BY HOMATROPINE.—It has for long been known that atropine, if used for the dilatation of the pupil in cases where there have been premonitory symptoms of glaucoma, is liable to bring on an acute attack of that disease. The action of homatropine, an alkaloid derived from the same source, and which has come into such general use during the last four years, is so much weaker that it has generally been believed that the danger attending a toxic mydriasis was obviated by its use. A case is, however, mentioned by Sachs (*Centralblatt für Augenh.*, Sept.), in which corneal haze, a semidilated motionless pupil, arterial pulsation, increased tension, diminution of central and peripheral vision—in short, all the symptoms of a glaucomatous attack, followed shortly on a single installation of homatropine. It speedily yielded to the antagonistic actionof eserine, however, as was to be expected from the fact that this drug is also efficacious in cutting short the attacks of glaucoma produced by atropine, which before it was used very rarely yielded to any but operative measures.

OCCASIONAL PERISCOPE OF SURGERY AND SURGICAL PATHOLOGY.

By Dr E. G. Bull.

Total Extirpation of the Larynx.—Holmer, who has twice recently performed this operation, finds that 68 cases in all have been recorded. France alone does not furnish any. At the time of writing 37 cases (75·5 per. cent.) of those fully recorded had already ended fatally, death in 21 instances being immediately due to the operation. Lung complications were the most fatal. In the majority of the other 16 cases recurrence led to the fatal issue. Hæmorrhage, suppuration, mediastinal complications, and septic conditions, even after very extensive operations, played no part as causes of death. Tracheotomy should always precede the operation, and in the latter the trachea should be separated from above downwards. No sutures as a rule are used, the wound being merely plugged with antiseptic tampons. To prevent the entrance of discharges into the larnyx, Trendelenberg's canula is employed with or without superimposed sponge-plugs. Holmer recommends that any wound in the anterior pharyngeal wall should be closed as far as possible by suture, and that the healthy epiglottis should be left. As the immediate danger of the operation increases with the extension of the disease, Holmer pleads for early interference whilst the neoplasm is still endolaryngeal. The prognosis of sarcoma seems rather better than that of carcinoma. A patient of Bottini's is now, eight years after the operation, free from disease, and able to follow his occupation as postman in a hilly district. Simple recurrent papilloma (not sarcomatous), syphilitic stenosis, perichondritis, and non-malignant ulceration and infiltration of the vocal cords, do not call for the performance of the operation (Holmer, *Hospitals-Tidendes*, Copenhagen, 1883).—C. Lauenstein in *Centralb. f. Chir.*

Mechanical Treatment of Gastric and Œsophageal Hæmorrhage.—Schilling proposes in such cases to introduce into the stomach the india-rubber bladder of Schoenborn's apparatus for facilitating gastrostomy. The bladder is oiled and when *in situ* is gradually blown up till equal pressure is exerted all over the internal gastric surface. The musculature of the stomach contracts on the bag, and clots form between the two opposed surfaces. In similar manner bleeding from the lower pharynx may be arrested by the insertion and distension of a suitable india-rubber tampon. In a case of severe and repeated gastric bleeding, Schilling allowed the balloon to remain *in situ* for 12 minutes. It was well borne, and the hæmorrhage was definitively arrested (Schilling, *Münch. ärzt. Intell.* 1884, 2).—H. Schmid in *Centralb. f. Chir.*

On Syphilis Hereditaria Tarda.—Barthélemy draws attention to the importance in this connexion of the following three groups of symptoms:—(1.) Alterations in the teeth, particularly dental-erosion, microdentism, abnormal shape and vulnerability of the dental substance. (2.) Lesions of the iris and cornea, in particular interstitial diffused keratitis. (3.) Disorders of hearing, especially that form of deafness which, developing usually between the ages of 10 and 15 years, affects at first one, and after a short time both ears without any demonstrable local affection being present (Barthélemy, *Monatsh. f. Prakt. Dermat.* 1884, p. 132).—E. Lesser in *Centralb. f. Chir.*

Syphilis Hæmorrhagica Neonatorum.—Petersen observed in the child of a syphilitic mother numerous cutaneous ecchymoses and hæmorrhages into the mucosæ of the intestines, bladder, nose, and umbilicus. The symptoms appeared to be those described by a number of authors as syph. hæm. neonatorum, but the autopsy showed that septic infection from the stump of the cord had been the cause of the hæmorrhages. Petersen concludes, that although congenital syphilis may favour hæmorrhage by rendering the blood-vessels more easily lacerable, and through visceral disease, yet there is no evidence to show that there is a true syphilitic hæmorrhagic diathesis (Petersen, *Viert. f. Dermat. u. Syph.* B. x.)—Lesser in *Centralb. f. Chir.*

Progressive and Intermittent Dilatation of the Eustachian Tube.—The following plan of treatment in cases of Eustachian stricture is recommended by Ménière as more satisfactory than the usual insufflations with air or medicaments. A metal catheter is introduced into the mouth of the tube and retained there with the left hand, whilst with the right an elastic bougie is gently passed through the catheter till it appears to be caught and can be no longer pressed forward without the use of force. The bougie is then left *in situ*, and the patient told to incline his head slightly forward. He remains in this position from 5 to 20 minutes, at the end of which time the bougie falls out spontaneously. This procedure is repeated daily with stronger bougies, and the instrument may, of course, be used to apply simultaneously any suitable medicaments (Eitelberg, *Zeits. f. Ohrk.* xii. H. i.)—K. Jaffé in *Centralb. f. Chir.*

Gastrostomy.—Since 1882, 52 cases of œsophageal disease have come under treatment in Albert's Clinic. There were 35 cases of carcinoma, 14 of cicatricial stricture, and 3 of foreign body. Operation was resorted to in 10 cases. In one case an exploratory laparotomy showed that the stomach was so highly contracted and fixed by morbid growth, that it could not be drawn forward. In a case of corrosive stricture, strong cicatricial bands, which reduced the capacity of the organ to a minimum, prevented the completion of the operation. The other 8 cases operated on were cancerous. The percentage of recoveries was 72·7. Maydl considers gastrostomy as preferable in general to œsophagotomy, and even to the combined external, with subsequent internal, œsophagotomy of Gussenbauer. When the stricture is seated high up, œsophagotomy is to be preferred, and the same in sudden occlusion of an old, easily-accessible stricture by a foreign body; yet even here gastrostomy might be advisable in order to raise the foreign body from below. Maydl considers the major operation indicated in fresh cases of corrosive poisoning in order to avoid starvation. The operation is best done in two sittings. The stomach should be opened with the thermo-cautery, and the aperture should be so small that it is completely closed by the drainage-tube that is introduced. Maydl twice observed a continued and progressive suppuration of the orifice without obvious cause. There was no case of gangrene from the action of the gastric juice, but there was one instance of prolapse of the gastric mucous membrane (C. Maydl, *Wien. Med. Presse*, 1883, 47, 48).—Hadlich, in *Centralb. f. Chir.*

PATHOLOGICAL ANATOMY OF THE MEDULLA OF BONES IN PHOSPHORUS POISONING.—Reniger gives the results of his experiments on dogs (chronic and acute poisoning) as follows:—1. In phosphorus poisoning there is a cellulo-fatty transformation of the marrow; in this the blood-vessels, especially the capillaries, participate. 2. In many cases hæmorrhages into the fatty medulla take place. 3. As the result of vascular change, venous hyperæmia, or other unknown conditions, blood-cells escape from the vessels in considerable numbers, and infiltrate the surrounding medulla. 4. In and around the medulla-cells pigment masses are formed through the breaking down of numerous red blood-corpuscles. 5. Osseous tissue atrophies, and the osteoblasts undergo cellulo-fatty metamorphosis (Reniger, *Inaug.-Diss.*, St Petersburg, 1883).—V. Heidenreich, in *Centralb. f. Chir.*

ABORTIVE TREATMENT OF SOFT CHANCRE.—The sore and its neighbourhood having been thoroughly cleaned and dried, are sprinkled with pure salicylic acid, and enveloped in a dry lint dressing. One dressing daily is generally enough; two will be required if there is much discharge. In three days a considerable white slough has formed, and the acid is replaced by a dressing of simple ointment. The slough speedily separates, and rapid healing ensues. It is stated that bubo-formation is prevented by this treatment (H. v. Hebra, *Wien. Med. Presse*, 1884, 14).—Hadlich, in *Centralb. f. Chir.*

TREATMENT OF SYPHILIS BY THE HYPODERMIC INJECTION OF CALOMEL.—Jullien, following Scarenzio and Smirnoff, directs attention to this form of treatment. The formula used is Smirnoff's modification. ℞: Calomel. sublim. parat., 0–1 to 0·15 gramme; gummi Arab. pulv., 0·05; aq. dest., 1·0. This is the dose for one injection. At the commencement of the treatment two such injections are made into the subcutaneous cellular tissue of the nates. Three weeks later two further injections are given, and the treatment terminates. Pains set in a few days after injection, but are not considerable. Abscesses of small extent frequently form in the neighbourhood of the punctures. Salivation occurs rapidly, and the therapeutic effects even in the gummy stage of syphilis are stated to be surprising (L. Jullien, *Annal. de Derm. et de Syph.*, Vol. v. No. 2).—Kopp, in *Centralb. f. Chir.*

INOPERABLE CARCINOMA MAMMÆ; ERYSIPELAS-INOCULATION; DEATH.—The patient was first operated upon in October 1882. In April 1883 active recurrence had taken place, involving the axilla as well as the lymphatic glands above and below the clavicle. It was decided to inoculate with a pure culture of erysipelas, prepared by Dr Fehleisen. On 20th May, at 11 A.M., a particle the size of a pin's head was rubbed into a freshly scarified spot on the surface of the morbid growth. On the evening of the same day the temperature was 40°·2 C.; rigor. 21*st May*.—Morning, temperature 40°·6 C. Almost the whole of the left pectoral region was now erysipelatous, and by the evening the right side was also involved. The temperature had risen to 41° C., and the pulse was 116. On the three following days the morbid process spread over the entire breast and abdomen, the right arm, and part of the back. The temperature fell somewhat, but the pulse-rate increased, and the patient died collapsed on the fourth day. *Effect of the Inoculation on the Neoplasm.*—A cancer nodule (gland), the size of a hazel-nut, situated under the clavicle, softened on the second day, and had completely disappeared by the fourth. The site was found occupied by a quantity of connective-tissue and serous fluid. The whole mass was softened in consistence and diminished in size. Microscopically, masses of erysipelas-cocci were found to have infiltrated the whole tumour-mass, bringing about in many cases a dissolution of the cancer-nests, and completely filling all the lymphatic spaces. While this case demonstrates the danger of erysipelas-inoculation, it shows, on the other hand, that, as a fact, resolution of carcinoma is brought about by the erysipelas process, for one sees directly the cancer-cells and nests perishing before the advance of the erysipelas-cocci.—Professors Janicke and Neisser in *Centralb. f. Chir.*

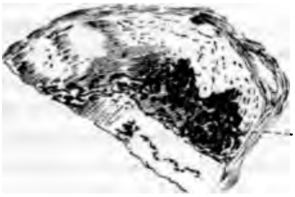

Fig. I. × 2 dia.

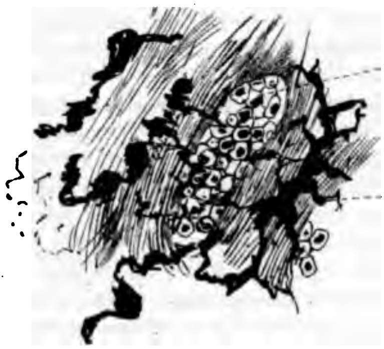

Fig. II. × 700 dia.

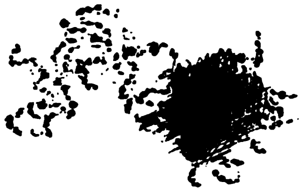

Fig III. Oil-immersion (Zeiss) 1/12 Oc IV. Cocci-chains and nodes

Janicke and Neisser on Erysipelas-inoculation in Carcinoma.

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Part Fourth.

MEDICAL NEWS.

Royal College of Physicians, Edinburgh.—The following gentlemen passed their final examination for the license at the sittings held since the 10th August 1884, and were admitted L.R.C.P. Ed.:—Jeremiah Ryan, Co. Cork; Ernest Frederic Eliot, Birmingham; Frederick Morton, Bristol; Edgar Forrester, Ontario, Canada; John Utting, Liverpool; Alex. Knight Sturgeon, Florence, Canada; Duncan Nevan Carmichael, Ontario, Canada; William Mathews, Cheshire; John Gascoigne Webb, London; John Stalker, Ontario, Canada; Peter Nicholas Davey, Ontario, Canada; Solomon Mathews Dorland, Ontario, Canada; Thomas M. Lawton, Ontario, Canada; Joseph Hick, Leeds; Robert Smith Robertson, Monymusk, Aberdeenshire; Arthur John Nitch Smith, London; Herbert Fitton, Dewsbury, Yorks.; Hugh Grosvenor Shaw, Leamington; Edward Semple, Bournemouth; Richard Edward Geuge, Dorchester; Sidney Herbert Youel, London; Edwin Price, Tipton, Staffs.; Tudor Germain Lavie, Edinburgh; Alfred Hill, York; Robert Henry Coall, Loughborough; William Coates, Manchester; Hugh Webb, London; William Stuart-Low, Carnforth, Lanc.

Royal College of Surgeons, Edinburgh.—The following gentlemen passed their final examination for the license at the sittings held in October 1884, and were admitted F.R.C.S. Ed.:—Charles Arundel Parker, Cumberland; Duncan Gow, London; Alex. M'Killop, London; William A. Ross, London; Dominick A. D'Monte, London; Charles Arblaster, Coventry.

Edinburgh Provident Dispensary, Marshall Street.—About 6000 patients annually. Consulting Physician, Dr Smart. Dental Surgeon, R. Urquhart. Hon. Medical Officer, Dr T. H. Pattison. Medical Officers, Dr Charles Bell, Dr Andrew Smart, Dr F. Troup, Dr Maciver. Assistant Medical Officer, T. Bairstow, L.R.C.P. and S.Ed. R. Urquhart, Secretary. Vaccination (Friday at 1 o'clock), Dr C. Bell. Diseases of Women and Children, Dr C. Bell (Tuesday and Friday at 1 o'clock). Surgical Instrument Maker, A. Young, North Bridge and Forrest Road.

The *Medical Report of the London Temperance Hospital* for 1883-4 gives a list of fifty-three cases of typhoid fever which were treated, with the result of six deaths. All the fatal cases were complicated. None of them were total abstainers. Of the abstainers who were under treatment all recovered, though some of them were severe cases. Alcohol was not administered in any case.

THE MODERN VIA AD ASTRA.

A MEDICAL FABLE.

Once upon a time a poor but humane physician was riding along a road which led by a dark forest, when he saw by the wayside a sick and miserable dog which had lain down to die. Moved with pity he got down from his carriage, picked up the poor animal tenderly, and gave it some food and drink. Suddenly the dog vanished, and he saw standing before him a beautiful fairy.

"You have saved me from a miserable doom by your compassion," she said. "Command now anything you wish and it shall be yours.'

The astonished physician replied, "I am a poor man. I should like to be rich."

The fairy waved her wand, and extended to him a piece of paper and a bottle filled with a dark-coloured fluid. "Here," she said, "is a prescription for an Infallible Compound Hair-Restorer. It will never fail, and it has been indorsed by all the leading clergymen on both continents. The world is yours! Do you wish more?"

"I am a quiet man," replied the doctor, "and little known. I should like to be famous."

"You shall be more; you shall be immortal." Waving her wand again, she presented to him a small, dark, and curiously shaped instrument. "See," she exclaimed, "it is a new and 'Unquestionably Perfect Pessary.' It radically restores every malposition. Your name is blown into the side. Generations of suffering women and successful doctors will read, and bless you. I have tried it myself," she added, blushing a little, and vanished.—*Boston Medical and Surgical Journal*, 11th September 1884.

OBITUARY.

DR JOHN NIVEN.

We regret to have to announce the death of Dr John Niven, who died on Friday, the 17th of October, after a short illness, at the age of 66. Edinburgh has in him lost one of her oldest practitioners. For forty-five years Dr Niven has had a successful career as a physician, never coming prominently before the public or his professional brethren on account of his retiring and modest disposition. A thoroughly scientific practitioner, abjuring all pretence, a man of wide knowledge and culture, and kindly and genial disposition, and who proved to many not only the sympathizing physician but also a staunch friend. Thus the late Professor George Wilson wrote of him—"John Niven is an exceedingly clear-headed fellow, gifted by nature with that estimable but unacquirable qualification, 'a physician's sagacity,' which like the ability to be a poet, of which Montgomery speaks, and which you may think far too noble a thing to be placed side by side with the calling of those who thrust their solemn phizzies into every abomination, is nevertheless equally the gift, I said, of nature and of God."

But Dr Niven has not passed away without contributing to the advance of medical science, as he was among the first, if not the first, to recognise the distinction between typhus and typhoid fever, a discovery which has been of incalculable value to the profession and to the public, a monument to his sagacity, and a valuable legacy to posterity.

Part First.

ORIGINAL COMMUNICATIONS.

I.—A CONTRIBUTION TO THORACIC SURGERY.

By D. Blair Brown, F.R.C.S. Edin., Surgeon-Major A.M.D.

The surgical feature which distinguishes the past ten years from all others, is the faith with which the cavities of the body are opened in, and the success which attends means few would previously have dared to attempt. Coincidently with this great stride, the atmospheric germ theory of Pasteur was brought into practical use in the formation of Lister's antiseptic system, which aimed at keeping such cavities and other wounds free from such micro-organisms. It would be difficult now to say whether the advance which has been made would have been so rapid without the confidence the system of Lister gave. The results, as now found, would not have been influenced, though the spread of the knowledge of surgical possibilities much lessened. To Sir Joseph Lister we therefore owe an immense obligation.

At not a little personal inconvenience, being under orders at the time to proceed on duty to Bombay, I was present in the theatre of King's College Hospital, London, on the 24th December last, and witnessed the operation by Sir Joseph Lister on Dr Burney Yeo's patient, whose case is so graphically recorded in the *Lancet* of the 23rd of February. The case was one of empyema communicating with the lung. No one can read, and much more, no one could witness such a triumph of surgical advancement without feeling a thrill of admiration.

It was just the case I wanted to see, as it cleared up many points connected with operative treatment on chests injured by gunshot, and the proper mode of keeping drainage tubes patent when so used. By referring to the *Lancet* above quoted, it will be seen that though a communication existed between the lungs and the pleural cavity, large quantities of purulent matter being expectorated of the same nature as contained in the pleural sac, that no evidence of putrefactive change was present. Dr Yeo on this point says, "that in this case the opening was probably valvular towards the lung, and only pushed open when the tension in the pleura reached a certain degree." But we are informed that Sir Joseph Lister was of opinion that the ciliated epithelium along the bronchial passages tends to keep septic particles which may be in the air from reaching the periphery of the lung, and that even though a little air may have escaped into the pleural cavity it would do no harm. On this subject the germ theorists must keep consistent. Recent utterances of Sir Joseph Lister's have made clear the fact that neither spray, gauze, nor carbolic acid are necessary to keep out the atmospheric organisms which were supposed to be the cause of all surgical mischief. From an antiseptic system applied to wound surroundings we are now introduced to one applied to wounds themselves. But is this new? There can be little doubt that drainage, as now applied to wound and body cavities, is the great advance we have made. Many cases will do well without it, but we have the outspoken retractions of Lawson Tait, Duncan, and others, who, thinking they might possibly give up drainage tubes, as they have spray and gauze, found they had to return thereto.

To Syme, whose genius taught us the necessity of not allowing the serum which is thrown off from cut surfaces for a few hours after apposition to collect, but left suitable means of escape, and to Chassaignac, who gave us the india-rubber drainage tube, we owe the powers we are now able to apply. In the case referred to spray and gauze were both used. During the time the spray was directed on the spot operated upon, a slight hitch took place in the working of the machine, and Sir Joseph Lister looked displeasingly toward the student in charge thereof. Ten years ago I saw the same incident with the same operator, but on a case of psoas abscess. Then he was very angry, and remarked that "probably the life of the patient would be the result of the same." Allowing all scope for advancement in this system, still once the atmospheric germ theory is thrown over, and air freely admitted to cavities and wounds, we fall back on what can have no claim thereto, viz., what we started with, modified by drainage. The fascinations which surround the germ theory and the paraphernalia hitherto thought necessary for its practice, have in the hands of some done no little harm. Where we have practical knowledge present, it matters little which manner of dressing is adopted, but where powers are expected from such proceeding in the absence of general surgical information, no good can result.

It is just fourteen years ago since I performed my first operation on the pleural cavity. The case was that of a boy, son of a senior army officer on the retired list. For months he had been noticed to have shortness of breath on exertion, and had been under treatment by a fashionable homœopath. I found the left side of his chest filled with fluid, and learnt that no physical examination of his chest had previously been made. With an aspirator I drew off more than two pints of clear serum, and in a short time he got quite well, being now an officer serving in this country, India. While one of the surgeons on the staff of the Herbert Hospital, Woolwich, I had several cases requiring this treatment, all of whom did well. My late friend Surgeon-Major Shepherd—who afterwards so nobly lost his life in Zululand—there attached to the same hospital, had some very severe and successful cases of this nature requiring operative treatment, in many of which I assisted him. I have never met with so many cases of this nature in a like space of time before or since. There seemed to be an epidemic of cases of pleurisy with effusion during the year of 1878 in Woolwich. Albuminuria and more or less pneumonia was present in each as well. A case would come to hospital with the history of a sudden onset, not always a rigor, great dyspnœa, and physical signs of one side of chest being distended with fluid. Personally I had only cases at this time to treat, where blistering, strapping, therapeutics, or aspiration effected a cure, so shall detail two which was under my intermittent care when orderly medical officer, a duty which came round every third or fourth day, and necessitated one's constant presence in the hospital for a period of twenty-eight hours.

The first case was drained by aspiration, over 90 ounces of clear serum taken away. For three days following, the patient improved; the temperature, which had been high, became normal, when a severe rigor occurred, and was followed by high fever. The fluid soon reaccumulated, and breathing becoming difficult, aspiration was again done—this time the fluid withdrawn being purulent. After a few hours he died.

The post-mortem showed lots of thick recent lymph coating the parietal and visceral pleura, and the lung itself in a state of carnification, quite like flesh. Heart was normal, had a large decolorized clot in the aorta. Spleen dark, soft, and pulpy. Liver large and friable. Kidneys large, pale, with capsule separable, and increase of cortical substance.

In this case we have illustrated two important facts, viz., that with every care suppuration will succeed, in rare instances, the operation of paracentesis thoracis, with the most improved instrument; and, secondly, allowing the operation to be successful, the state of the pulmonary tissue was such that it could never have become normal and expanded again.

The next case is one which a large number of my colleages who were at Woolwich in 1878 will well remember by his name, viz., "Lappin." The same sort of symptoms as already detailed ushered in the pleuritic effusion, which was early diagnosed. The right side was that affected, and three pints of clear serum were withdrawn by aspiration. The fluid reaccumulated time after time, requiring the same treatment to be repeated. After about three months of this proceeding, one of the punctures became fistulous, remaining open, giving free vent to the matters secreted. These were perfectly fresh, no odour. A probe was frequently passed into the pleural cavity in order to keep the opening free; air freely got egress to the cavity. He breathed easily and eat voraciously, his temperature being about normal. So chronic was this case, and apparently so comfortable, that after being six months in hospital everyone was surprised to hear he had suddenly died. A patient in a neighbouring bed died that night from aneurism of the aorta, and it was remarked that this man was much moved thereby. In the morning he was found dead, not having even disturbed the special orderly on duty over him.

The post-mortem disclosed the following:—There was œdema of the lower limbs. Skin of a pearly white aspect. Right pleural cavity full of fluid. Upper portion consisted of clear serum, the lower thicker and more puriform, but quite free from smell. Parietal and visceral pleural surfaces coated with thick yellow lymph. Lung densely adherent, and substance at base riddled with small cavities and abscesses. Other portion of lung hard, fleshy, and cartilaginous, absence of all vesicular substance. Left lung normal. Heart dilated, mitral valve thickened, the walls of right auricle very thin, substance pale, loaded with external fat. Liver large and firm in consistence, with some scattered soft patches. Iodine solution gave well-marked reaction. Kidneys large and flabby.

In this case we see that free admission of air did not cause the fluid to become offensive, or the temperature to rise, but to the least degree. The next two cases I shall now detail occurred at Dover, and were under my personal care. In civil hospitals surgeons have much more power as regards the adoption of surgical proceedings than in military ones. This, however, is being rapidly altered.

Private J. W., of the 49th Regiment, an old soldier with nearly twenty years' service, was admitted on the 5th August 1880 complaining of a stitch in his side and shortness of breath. He frankly acknowledged that he had "always drank as much as he could get." Dulness on percussion was present over the lower two-thirds of left lung. Temperature was found to be 100°·2 F., and the pulse 85 per minute. Distinct friction was heard on auscultation over the dull area, and crepitation of a fine character over the upper portion of the lung. The whole pleural cavity gradually filled with fluid, and by the 12th day of the illness the left side of the chest was greatly distended. The heart's apex beat was found much changed, beating in the middle line, and dyspnœa was great. I aspirated the cavity and withdrew 49 ozs. of clear serum, with much relief to the symptoms. His only complaint then was a constant pain in his left shoulder. About a week after this operation, the effusion having again occurred, I aspirated a second time, and drew off nearly as much clear serum as before. The temperature then became normal, and he was soon allowed "up," *i.e.*, out of bed, for a short time during the day, and had a hearty appetite and was very cheerful. On percussion a super-resonant sound was elicited, and little evidence of the lung's expansion. At the base of the lung posteriorly loud tubular sounds were heard.

Just a fortnight after the last operation the patient had a rigor; nothing would induce him to consider himself an invalid and to take extra care of himself. Symptoms of rapid effusion again set in, accompanied by high temperature. I again aspirated, and drew off muddy-coloured fluid, which as it drained away towards its end was distinctly puriform. The temperature was not affected by this proceeding, remaining high, so after a few days I made a free incision between the sixth and seventh rib, in the mid axillary line, into the chest cavity, and inserted a drainage tube, placing protective and tarred tow over the same as a dressing. The temperature at once fell to about the normal, and every hope was entertained. It was found very difficult to keep the tube in its position. On the second day it was found that it had fallen out, and considerable difficulty was experienced in maintaining its patency. The movements of the ribs and the expansion of the lung all served to influence against the proper action of the drainage tube. Finding the effusion got free vent through the wound, I did not persist in the use of the tube, merely attending to the application of suitable dressings, for its absorption and purity, once outside the thoracic walls. For three weeks this state of things went on, a little puriform discharge escaping, but never the least odour therefrom, or the slightest elevation of the patient's temperature. At every dressing the air whistled in and out the opening in the chest wall in an unmistakable manner. A very severe thunder-storm happened to take place at this time, and I remarked at breakfast, when told the "milk had gone bad in the night," that I feared my case would be worse in consequence too. When I got to hospital I found it so; the discharge for the first time was most distinctly offensive, and the temperature had risen two and a half degrees. From this point the case rapidly went down hill and died. The post-mortem examination revealed the parietal and visceral layers of pleura to be coated thickly with a firm yellow layer of lymph. The lung compressed into small space and carnified. The pleural cavity contained about 12 oz. of purulent matter. The other lung was healthy. The aorta was studded with atheromatous deposits, and the other organs much as found in the cases already detailed. Here we note all that was wanting was free drainage to have saved a life! Had I known how to take the piece of rib out, or dared to have done it, as I would try now, I am sanguine enough to have expected this case would have turned out a successful one. The presence of air did not for more than three weeks injure the inflammatory products effused into the cavity, as they remained pure in nature and smell, and there was total absence of fever. The post-mortem appearance of the cases now recorded show a strong similarity as regards the pleural surfaces. In each there was a thick coating of yellow lymph.

Two explanations are given for the formation—one that the blood in such inflammatory diseases is overcharged with fibrine, and that it is the coagulation of this within and upon such tissues which give rise to it; while the other states that the tissues so inflamed acquire the power of coagulating such exuded fibrine, and so these thick formations arise. This latter view is strengthened by the records of these cases—there being no effusion in the interstices of the inner side of the pleural membrane. The lung was found in a carnified condition at each of the post-mortem examinations, destitute of vesicular sponginess, showing the danger of delaying curative proceedings in cases of pleural effusions. It cannot be expected that such fleshy lungs can ever regain their former normal condition, but it is a fortunate circumstance that very fair health can be maintained if the other one is in a normal condition.

From the fact that in addition to frequent withdrawal of fluid from both pleural cavities, the pericardium was also operated upon, the following case is one of special interest:—

Private P. O'N., of the 86th Regiment, came under my care on the 27th July 1880, complaining of great pain in his left side and shortness of breath. He had been quite well the day before, and did not recollect getting wet or having had a rigor. His temperature was found to be 102°·4 F., and all the usual physical signs of acute pleurisy of the left side were present. He had the usual hot spongio-piline fomentations to his chest, and aconite, digitalis, camphor, etc., given internally. The temperature fell on the 29th to 100° F. in the morning, and 101°·6 in the evening, but in addition to the friction sounds heard over the left pleura, over the pericardial area similar sounds were present. On the 1st of August the heart's sounds were less clearly heard, the cardiac dulness much increased, and friction was heard at the heart's base. Evidence of considerable effusion into the left pleural cavity was easily made out.

On the 3rd of August similar signs of effusion were recognised in the right pleura. All three cavities were thus distended with fluid. Dulness on percussion, and absence of vesicular sounds and vocal fremitus were found over the lower half of each lung. The temperature in the mornings was about normal, in the evening it always rose to about 101° F. Patient suffered from considerable pain and oppression, referred chiefly to the precordial region. Anxious expression of countenance, and his sleep was bad. Respirations 40 per minute; pulse small, weak, and over 90. Bowels regular.

On the 5th of August the dyspnœa had increased; the left pleural cavity was very nearly filled with fluid. The temperature in the morning is still about normal. On the 6th August I performed paracentesis thoracis of the left pleura. Over 40 oz. of clear serum were withdrawn. Slight diminution of the area of dulness resulted, but it was evident there was more fluid in the side. Next day it was found he had slept better during the night, but the dyspnœa was still great. He complained chiefly of pain over the diaphragm, about the base of the pericardium, which sac was greatly distended. The effusion in the right side rapidly increased, and was at this date more in degree than on the left side. All the ordinary and extraordinary muscles of respiration were fully employed, only a small portion of the apices of both lungs being pervious to air, and therefore available for respiration. The heart's sounds were greatly muffled and distant. I aspirated the right side of chest, and withdrew 108 oz. of clear serum. This gave marked relief. Pressure over the pericardial area gave great pain, and caused the patient to gasp for breath. On the 8th August the dyspnœa was less, the respirations 38, and the pulse unaltered. His urine was scanty, dark, no albumen; specific gravity, 1035. He was bathed in profuse perspiration. When he fell asleep he would suddenly wake up with a start. The pericardium was enormously distended; heart's impulse could just be felt beating two inches below and in a line with the ensiform cartilage. At midnight I was hastily summoned, and found him breathing 50 to the minute as well as I could count, pulse just able to be felt, and the dyspnœa extreme. I punctured the pericardium and withdrew 75 oz. of clear serum, with immense relief to the patient. The cardiac force soon returned, and in a few hours the respirations went down to 32 per minute, and he slept soundly the rest of the night.

On the 9th August he for the first time expectorated adhesive mucus, sometimes slightly streaked with blood. Had great thirst, but did not perspire so freely. The temperature continued a little above normal in the morning, but rising in the evenings to over 101° F. For these reasons the supposition of a tuberculous nature of the illness was discussed. Next day respiration was heard all over the right lung, dulness on percussion, and absence of vocal resonance still existed over lower two-thirds of left pleural cavity. Bowels were freely opened. On the 11th August, as respiration was not yet established in the left side of chest, the temperature at night remaining high, I again aspirated this side, drawing off 71 oz. of *turbid* serum. Patient after this felt much relief, breathing easily. The temperature, however, rose to 102°·6 in the evening. He slept well all the following night, and in the morning his pulse was found to be much stronger, he was able to lie on his right side, and felt hungry. Percussion elicited a much clearer note over the whole chest than had been heard since the first days of his illness. From this date the temperature increased in degree, being on several occasions over 104° F. at night. He complained of a sore throat, and his expression became pinched and anxious. Respirations 33, pulse 95, urine as last recorded. All kinds of antipyretics were given without much benefit. Emaciation went on rapidly, the stomach became irritable, and he gradually sank, death taking place on the 8th of September, one month and ten days since his admission to hospital, and thirty-two days after the first operation. Paracentesis of both pleural cavities—the left one twice—and of the pericardium had been performed. At the post-mortem examination the following conditions were discovered. The body was greatly emaciated. On opening the chest by removal of the sternum with the costal cartilages attached, the pericardium and adjoining pleura were found to be densely adherent and very thick, being made up of layers of yellow lymph. The cavity of the pericardium contained 30 oz. of clear serum. The visceral and parietal surfaces of the sac were coated by a very fine layer of velvety lymph. The left pleural cavity was half filled with sero-purulent fluid, but which was free from smell. The left lung was firmly adherent to the vertebral column, and, with the exception of its apex, was in a state of carnification, no evidence of its former vesicular condition remaining. The right pleura contained about half as much serum as was in the other side. This, however, was perfectly clear. The lung was firmly adherent to the walls of the chest, and when torn off the thick coat of yellow lymph forming the connexion came with it. Only the upper third of the lung was vesicular and therefore fit for respiration, the rest was consolidated in a state of red hepatization. At the apex of both lungs small chronic cavities existed, but no cretaceous masses could be found in either. The heart was pale and fatty, and a large decolorized clot filled the aorta. The liver was increased in size, fatty, and nutmeg on section. The kidneys were enlarged, and their cortical substance increased. The spleen small and pulpy in consistence. The whole of the abdominal peritoneum, both visceral and parietal, was studded in the thickest manner with miliary tubercle; this was mostly present in the region of the mesentery. None were seen on the pleural surfaces, though doubtless they were there, the thick inflammatory exudations interfering with their being visible.

These effusions, occurring from tuberculous causes, are now the subject of much interest; with this case one recorded in the *Lancet* for the 2nd of August last might be read. It is one of endocarditis complicated by tubercular pleurisy with effusion, reported by Dr Sidney Coupland. The discovery of the bacillus of tubercle, however characteristic, has not taught us much practical good yet. If these micro-organisms stand in the relation of cause and effect, why was this general diffusion of tubercle delayed, seeing the long-standing disease which existed in the apices of both lungs? Also, why do such miliary diffusions not more frequently occur in cases of ordinary phthisis?

II.—RECORD OF CASES TREATED IN WARD XXVIII., ROYAL INFIRMARY, EDINBURGH, FROM 1ST NOVEMBER 1883 TO 30TH APRIL 1884.

By ANGUS MACDONALD, M.D.

(*Read before the Edinburgh Obstetrical Society, 25th June* 1884.)

(*Continued from page* 412.)

GROUP F.—UTERINE CATARRH.

OF these, two were treated in hospital. A much larger number were treated as out-patients.

CASE I.—Mrs G., æt. 36, admitted 2nd Jan. 1884, complaining of pain in the lower part of her abdomen, and of dysmenorrhœa. Patient has had four children, and dates her illness from the birth of her last child two years ago.

Physical Examination.—Vaginal portion of cervix is somewhat hypertrophied, outer edge torn, not deeply; slight eversion of both lips. Granular condition round the external os. Uterus somewhat retroverted and tender.

Treatment.—Nitric acid was applied to the interior of the cervix and body of the uterus. Patient was dismissed on 3rd Feb., greatly improved.

CASE II.—Mrs S., æt. 21, admitted 7th April 1884, complaining of profuse menstruation and white intermenstrual discharge. Patient has had one child, and her illness dates from its birth.

Physical Examination.—Vaginal portion of cervix somewhat enlarged, distinctly granular and tender. Right ovary prolapsed and tender. Fundus not enlarged nor tender.

Treatment.—A stick of Skölberg's caustic was passed into the cervix. A few days afterwards her condition was found to have considerably improved. There was still some erosion round the external os, and pure nitric acid was applied to it. Patient was dismissed on 26th April, greatly improved.

She afterwards returned twice or three times to get the cervix touched. On last occasion the cure was complete.

These two cases present examples of chronic cervical endometritis. In the former case we believed the mucous membrane of the body was also affected, and in touching the cervical canal also applied the nitric acid to the body. In treating inflammation of the cervix with granular erosion in my experience, strong nitric acid carefully applied is one of the most successful means of treatment. There need be no fear of doing harm if it is lightly applied, and care be taken to limit its action by the application of some portions of cotton-wool steeped in a saturated solution of sodic bicarbonate. But when the inflammation is chiefly restricted to the canal of the cervix, I think the use of Skölberg's caustic, or of tincture of iodine, or of carbolic acid diluted in glycerine, is better, as I have known serious contraction of the cervical canal to follow the free application of nitric acid to it.

There exists an unnecessary dread, however, in some quarters of the effects of nitric acid in uterine cases. If properly applied it causes next to no pain. It is of great value as a stimulant in catarrhal conditions of the endometrium, and is not at all likely to cause troublesome reaction.

In using Skōlberg's zinc alum caustic sticks, it is necessary to make sure that the caustic sticks do not slip from the cervix by introducing a plug of cotton-wool steeped in glycerine before the speculum is withdrawn. It is also necessary to remove this plug and wash out the vagina about five hours after it has been applied, and to repeat the vaginal wash daily for about a week. The patient ought also to keep her bed meanwhile.

The effects of these caustic sticks on cervical catarrh are extremely satisfactory in most cases.

GROUP G.—PERITYPHLITIC ABSCESS.

Mrs M., æt. 47, was admitted on 20th March 1884, complaining of a swelling in her right iliac region.

Her illness began, three weeks before admission, with constipation of the bowels; she took aperient medicine, and after the bowels were moved she experienced sharp shooting pains in the right side. On admission, a large part of the lower region of her abdomen was found to be distended by a hard tumour. Fluctuation was detected close above Poupart's ligament, near the inguinal ring. The abscess was opened at the fluctuating spot, and a large quantity of offensive pus set free. A large drainage tube was introduced into the wound, and dressing applied. Patient made a rapid recovery, and was dismissed on 3rd April perfectly well.

This case ought not in strict propriety to have been sent to my care, as the abscess was clearly not due to any disease affecting the pelvic organs. It manifestly originated in the connective tissue surrounding the caput cæcum coli.

Its presence in the ward was, however, useful for clinical purposes, inasmuch as I was able to point out to the class that the pelvic organs were all healthy and the pelvis free, and thus to prove that the tumour took its origin above the pelvic inlet. Its peculiar development along Poupart's ligament pointed to an origin in relation to the caput cæcum coli, which the further history of the case rendered nearly certain.

GROUP H.—CYSTITIS.

Of this group we have had five cases under treatment.

CASE I.—E. M., admitted 6th Dec. 1883, complaining of painful micturition, and a down-bearing feeling. Urine contained pus and blood.

The outer aspects of the labia majora and the inner aspect of the nates are covered with a papular eruption of a rose colour.

Treatment.—Milk diet, with strict rest. An alkaline mixture with pareira was given internally, and a lotion of bismuth, zinc, glycerine, and lime water was applied to the eruption. Patient was dismissed quite well on 24th Dec.

Case II.—C. K., admitted 7th Nov. 1883, complaining of frequent and painful micturition. Urine contained pus and blood, reaction alkaline, no tube casts.

Physical Examination.—Bladder walls thickened on both sides, but more so on right than left. Sound passes into bladder 3½ inches. Elasticity of bladder walls deficient.

Treatment. — Patient first had an alkaline mixture, then the following injections into the bladder were tried in succession:—

Quinine, 2 grs. to the ounce; salt and water; nitrate of silver, 1–4 grs. to the ounce; iodoform, starch, etc. Patient also was blistered over the hypogastrium. The treatment did her little good. *6th Feb.*—On examination, thickening on right side of bladder found distinctly greater than on admission.

Patient has become very anæmic, and has suffered considerably from boils. Patient was now put upon tincture of perchloride of iron, under which she improved to some extent, and was dismissed on 22nd March 1884 without any decided betterness.

Case III.—Mrs N., æt. 42, admitted 17th November 1883, complaining of painful micturition for several months past. Is not aware of any cause for her illness.

Physical Examination.—External opening of urethra much dilated. Pain on pressing base of bladder. Anterior vaginal wall congested. No stone or foreign body in bladder. Walls somewhat thickened and tender on pressure. Sound enters 4 inches, causing some considerable pain. Urine alkaline; contains also some pus cells.

Treatment.—Milk diet, rest, and a mixture of benzoic acid and borax, with infusion of buchu. Dismissed greatly improved, after a few weeks' residence in the ward.

Case IV.—Mrs I., æt. 50, admitted 19th January 1884, complaining of something coming down, and of incontinence of urine, accompanied with great pain.

Physical Examination.—Large rectocele protruding from vulva. Uterus slightly retroverted and heavy. Walls of bladder thickened. Sound passes into bladder 3 inches. No elasticity. Urine contains urates, phosphates, albumen ⅛, pus, no tube-casts.

Treatment.—Patient first had an alkaline mixture; then the bladder was injected with iodoform and starch; then with borax and glycerine. No benefit was derived. The rectocele was replaced, and vagina packed with plugs steeped in glycerine and alum, but the plugs would not remain *in situ.* Morphia was allowed at night to correct the severe pain.

On further examination some tender nodules were felt in the right and left broad ligaments, probably malignant in origin. Patient went home on 25th February *in statu quo.*

CASE V.—Mrs K., æt. 29, admitted 12th February, complaining of frequent and painful micturition.

Physical Examination.—Uterus retroverted; tenderness and slight fulness in Douglas's pouch. Tenderness complained of when anterior and posterior bladder walls are pressed against each other. Sound passed into bladder 4½ inches without much pain. Mucous membrane feels rough on posterior wall.

Treatment.—Patient's bladder was injected with iodoform and starch mixture, and in a few days her condition was greatly improved; but a severe attack of acute nephritis took place, which attack was accounted for by the impurity of the starch used in the injection. Patient was put on milk diet and given a diuretic mixture, under which she made a quick recovery, and was dismissed greatly improved.

The diagnosis of the cause and the treatment of cystitis are among the most difficult questions that fall under the care of the gynæcologist. So many reflex influences concur in acting upon the female bladder, that it is a work of great difficulty to decide in a given case which or how many of them are operative in originating and maintaining the cystitis.

Case No. I. presents a simple example of vesical catarrh, associated with, if not kept going by, an irritating papular eruption of the labia. The cure of this eruption with a simple alkaline mixture internally, combined with milk diet and rest, speedily effected a cure. But in Case No. II. we had to deal with some organic change in the uterine walls, giving rise to thickening of them and irritation of the mucous membrane. The irritation and frequent emptying of the bladder had further led to permanent contraction of the organ, the sound entering only 3½ inches, whereas it ought to pass 4½–5 inches. From prolonged observation of this patient's case, I came to the conclusion that I had to deal most probably with tubercular disease of the bladder, extending from the right ovary on to the bladder.

This opinion was formed from finding the presence of thickening in the region of the right ovary and extending to the bladder, and from the fact that notwithstanding all our efforts to improve the patient's general and local condition she steadily lost strength, and the bladder symptoms did not improve, but got worse if anything.

Case III. was a simple one. The peculiar dilation of the external opening of the urethra was a condition for which we could not find an explanation. There was considerable tenderness, but little contraction of the bladder. Rest, milk diet, and medicines to correct the alkalinity of the urine, improved the patient's condition greatly.

Case IV. proved to be one of an absolutely intractable nature. It was doubtless due to malignant disease, as evinced by the miserably cachectic appearance of the patient, her excessive pains, and the way in which they resisted all our efforts at treatment. This view of her case was further strengthened by finding the bladder surrounded with hard nodules. The incontinence in this case was not properly so called. It merely consisted of an irresistible down-bearing effort, due to recurrent bladder spasm, and not to weakness of the sphincter. The same down-bearing tendency had produced the rectocele, which protruded through the vulva, the anal sphincter being powerful, and preventing prolapse of the rectum. Nothing that we could think of, except repeated opiates, could give relief to this patient.

Case V. presents one that yielded satisfactorily to treatment, although whilst it was under our care somewhat alarming renal symptoms supervened. Having found iodoform and starch extremely useful as an injection on several occasions in the proportion of ʒss. of iodoform and ʒj. of starch to ℥iv. of distilled water, this was tried in Mrs K.'s case also.

As we had reason to believe, owing to some impurities that had been in the starch, there was a dangerous amount of reaction with renal symptoms and fever. These, however, passed rapidly away; and the acute condition, when treated by sedatives, rest, and milk diet, subsided, leaving the patient well.

This group of cases, however, is perhaps the least satisfactory in the present report. They are rather briefly recorded, else it would come out that we paid considerable attention to food and general management as well as to the local condition. Milk diet and eggs, with occasional use of soup, were allowed. Rest was strictly insisted upon, and every means was taken, as in the case of the girl K. (No. II.), to improve the general condition of the patient.

The use of alcoholic stimulants and of a stimulating diet were withheld in all the cases, as alcohol in any form appears injurious in bladder cases. Too much attention, however, cannot be paid to the maintenance of rest, and to the keeping up of the general strength by attention to the administration of a generous but non-stimulating dietary. The use of the hot vaginal douche is also frequently fraught with decided benefit.

GROUP I.—PARAMETRITIS.

Three cases in all. The third, however, is complicated with perimetritis.

CASE I.—Mrs L., æt. 28; four years married; had three children, the youngest a month before admission; was admitted 11th December 1883, complaining of feverishness, loss of appetite, and pain in left iliac region.

Physical Examination.—P.V., Cervix very short and much swollen. On left side near broad ligament is a large, tender, flatly oval mass, the size of a man's fist; the mass displaces the uterus towards right side. Cervix is still open, and admits the first joint of middle finger. Douglas's pouch is clear. On the right side nothing to be made out except low down at neck, where a hard mass is felt.

Treatment.—Rest in bed, hot fomentations, and poultices over lower part of abdomen. For a month after admission her evening temperature ranged from 104° to 100°, her morning from 100° to normal. She got quinine repeatedly at night; temperature at the end of the month became normal and remained so. Patient gradually improved, and on dismissal (28th February 1884), the following entry occurs in Ward Journal:—"Right parametrium clear; some thickening (very slightly tender) in left broad ligament. Uterus is normal, or nearly so, permanently displaced towards the left."

CASE II.—E. R., æt. 32; unmarried; admitted 29th March 1884, complaining of pain in the lower part of the abdomen on the right side.

Physical Examination.—P.V., To the right of the uterus there is a considerable amount of hard exudation, extending to the right wall of the pelvis from the mesial line. Uterus pushed towards the left. Left broad ligament clear. Vaginal wall can be moved readily over the edges of the mass.

Treatment.—Ordered a blister over right iliac region, rest in bed, and hot vaginal injections. *15th April.*—Exudation in right broad ligament nearly completely disappeared. *21st April.*—Dismissed cured.

CASE III.—J. N., æt. 30, admitted 10th March 1884, complaining of severe pain in right side. The pain began three weeks before admission, when patient was engaged in washing on a cold, wet day. Patient was menstruating at the time.

Physical Examination.—P.V., Uterus displaced to left side by large mass of inflammatory exudation occupying right broad ligament, extending deeply on right side of cervix. Left side of cervix is clear. The mass extends just above the brim, but not more.

Treatment.—Rest, hot douche, and poultices.

8th April.—Deal-board hardness high up behind uterus and to both sides, but chiefly to the right.

24th April.—Still considerable hardness high up in right side and behind uterus. Sent to Convalescent Home.

The above cases appear to need very little comment, except on the question of diagnosis. The first two appear to me to be tolerably clear cases of parametritis. To this conclusion I am driven by the unilocular nature of the masses, and the deep position that the masses occupied on both occasions; on each time they seemed to present a cast of the broad ligaments, extending downwards low into the pelvis. It is a fact also which I consider of considerable importance in establishing a diagnosis between parametritis and perimetritis that the rest of the pelvis remained in Cases Nos. I. and II. unaffected. I believe it is seldom that acute perimetritis occurs on one side of the pelvis only. It nearly always spreads to the other side, and to the fold of Douglas. A point also that weighs not a little with me in regard to diagnosis is the fact of such complete and rapid absorption of the effused material. I have long cherished the notion, which, I think, I gathered from practical observation, that effusion into the connective tissue of the pelvis, if suppuration and consequent destruction of tissues do not supervene, disappears usually more completely and quickly than when the peritoneum is affected. I am certain I have noticed more frequently permanent changes follow peritoneal inflammation than connective tissue inflammation. It is as gratifying as it is surprising to watch the complete way in which recovery was established in Case No. I., although the case was a very severe one. I have also tried formerly to show that when the connective tissue of the pelvis is alone involved in inflammation, the exudation keeps low down and tends to cause apparent shortening of either one side or of the whole of the cervix, according as the parametritis is unilateral or bilateral, whereas perimetritis, while it fixes the cervix, leaves it projecting free throughout its entire length from the surface of the hard mass in which it is embedded. This sign is noted in Nos. I. and III. But that No. III. was a mixed case is shown by finding the deal-board hardness, so characteristic of perimetritis, develop afterwards.

As to treatment, after using many so-called discutients, from iodide of potassium to bichloride of mercury, I have come to follow the practice of letting well alone, and trusting to rest and recumbency, counter-irritation, and to the treatment of symptoms as they arise, believing that nature will do the rest better than when internal absorbents are employed.

GROUP J.—RETRO-UTERINE INTRA-PELVIC HÆMATOCELE.

CASE I.—Mrs W., æt. 28, admitted 12th February 1884, complaining of an aching pain in the small of her back and left side. Pain is worse at night, and when the bowels are being moved. Patient says she got a chill during her last menstrual period.

Physical Examination (12th February).—P.V., Behind uterus and on either side there is a considerable amount of firm deposit. The uterus is fixed in the mass in a position of retroversion. Sound enters without pain backwards and upwards 2¾ inches. No part of the mass can be felt above pelvis on either side. The *temperature* is normal.

Treatment.—Rest in bed, and an ice poultice for the pain.

23rd Feb.—Patient expresses herself quite free from pain; discharge almost ceased. P.V., The deposit has almost disappeared. Patient dismissed.

CASE II.—Mrs M'N., æt. 27. Had six children, the youngest 14 months before admission. Admitted 1st April 1884, complaining of pain in back and groins, and great pain when bowels are being moved. Patient's illness began two weeks before admission. She believes she gave herself a strain while she was menstruating.

Physical Examination.—P.V., Vagina short. Fold of Douglas filled with a tender mass, which maintains the uterus in a forward position. The mass is fully more developed on left than on right side, and does not rise above the brim. Uterus is attached somewhat loosely to the anterior aspect of the tumour. *Temperature* normal.

Treatment.—Rest in bed. Ice poultices when pain is severe.

21st April.—The mass has considerably diminished in all its dimensions. On the right side, and behind the uterus, there is a knotted feeling: on the left, a cartilaginous mass, the thickness of the finger, can be felt.

23rd April.—Patient left hospital of her own accord, feeling nearly quite well.

There is little to remark on these cases. The diagnosis of hæmatocele is nearly always subject to the doubt that the tumour which one regards as a clot of blood another might regard as inflammatory effusion, more particularly so, since, if the blood has been poured out for some time, inflammatory irritation must co-exist. I have diagnosed the above two cases as hæmatocele on account of the absence of temperature, the sudden onset of the disease, and the situation, as well as subsequent history, of the effusion.

The treatment of such cases is only rest and cold applications. All attempts at interfering actively can only do harm.

Lupus of Vulva.

A. C., æt. 46, North Shields, married, admitted 31st October 1883, complaining of a growth on external parts.

History.—Two years ago patient noticed a white and yellow discharge, which was sometimes bloody; more recently it has been watery. Soon after this discharge there appeared on the external parts "spots," which gradually increased in size, and then broke. No history of malignant or of specific disease in family.

Physical Examination.—Both labia majora, especially left, are abnormally large. At the situation of anterior commissure there are two nodules, the one on the right about half the size of a boy's marble, the one on the left about one-third the size thereof. The smaller of those nodules is somewhat irregular, and their inner aspects, where they meet, raw; their colour deep rose. On separating the labia majora, there is disclosed considerable ulcerated surface, from which exudes a grumous, pus-like fluid. The chief situation of the ulcerated surface is towards the posterior commissure, where it extends on each side to a distance of 1⅛ inch in length and ¾ inch in breadth. The long axis of the surface is from before backwards. On deeply separating the labia it is found that ulcerative action has destroyed almost completely both labia minora, their situation being occupied by two elongated ulcerated surfaces. The posterior portion of the left labium minus is very much hypertrophied, and separated from the rest of the vulva by ulcerative action, so as to present a polypoid character. In the direction of the clitoris the ulceration burrows upwards to the distance of fully an inch. The feel of the ulcerated surfaces, as well as their surroundings, wants the marked hardness characteristic of carcinoma. There is hypertrophy of tissues surrounding the ulcerated surfaces. The ulceration in the left side goes quite to the anus, on the right leaves a portion of the perineum, about 1 inch in length, free. In no part does the disease ascend more than 1 inch up the vagina. Uterus and vagina otherwise healthy.

Treatment.—On 17th November Dr Macdonald removed with thermo-cautery the whole of the diseased part. Patient made an excellent recovery. On 16th January the following entry was made in case-book:—"The healing has proceeded very completely, the whole surface being cicatrized over, with the exception of a small portion at its upper extremity, and a linear surface along its left border. With the exception of a small surface to the left posteriorly, the whole surface appears healthy.

19th Jan.—Dr Macdonald touched with thermo-cautery the unhealthy-looking surfaces.

24th Jan.—Patient dismissed cured.

This case was so recently made the subject of a special contribution to the *res gestæ* of this Society, that I feel it would be quite out of place to delay the members by any lengthened remarks upon the matter. Suffice it to say that I am particularly gratified to find that the latest microscopical sections, prepared with extreme care by Dr Chapman for me, and lately exhibited before this Society, agree in appearance with the best authenticated specimens of ordinary lupus tissue. There is therefore the best reason to believe that Hyguier, West, etc., are right in regarding such cases as essentially analogous to lupus of the face, and not a mere peculiar variety of syphilitic change.

In none of the cases which have come under my personal observation could any trace of syphilis be found.

I would also like to state that where there is deep lupus, active measures must be taken to remove the diseased tissue before healing applications be applied to the affected surface.

Irritable Hymen.

Mrs G., æt. 26; one year married, no children, but one miscarriage. Admitted to Ward XXVIII., complaining of dyspareunia.

Physical Examination.—In the deeper part of the vulva, immediately outside the hymen, and involving it, there are large red, excessively irritable patches, which give rise to extreme pain when touched, and render marital intercourse impossible.

Treatment.—The part was dressed with iodoform for some time; but as this treatment was only partially successful, Dr Macdonald, on 22nd January 1884, removed the mucous membrane all round the hymen, and brought the edges together with a continuous catgut suture. *18th Feb.*—All special irritability has departed from the irritable surfaces, and patient was dismissed cured.

The above is one of a class that gives considerable trouble to the gynæcologist. I acted upon the suggestion of the late Dr Marion Sims, and removed the irritable hymen and adjacent tissues with the knife. To get rid of capillary oozing, I brought the surfaces together with continuous catgut suture. The patient did well, and went out apparently cured. Whether the cure has been permanent I have not been able as yet to ascertain.

Disease—Perinephritic Abscess.

Mrs S., æt. 26; had two children, youngest two years ago; was admitted 13th February 1884, complaining of a pain in her right lumbar region, and of pain in the region of the bladder after micturition. Patient states she first experienced the pain six months ago; it began in the hypogastric region, and then travelled up to the right lumbar region.

Condition on Admission.—Patient has a wasted, care-worn appearance.

Physical Examination.—Abdomen projects a little in the right half of the umbilical, and whole of the right lumbar, and part of the right hypochondriac region. On palpation, a sense of increased resistance exists in the part of abdomen above mentioned. Tumour is fixed, tender, and fluctuates. It extends far back, so as to be felt behind as well as in front. Percussion over the tumour gives a rather dull note, leaving, however, a clear space between the hepatic and tumour dulness.

P.V.—Uterus is far back. Vaginal portion seems natural, apparently fixed in position. Certain amount of thickening, apparently parametric in nature, covers the right side of the pelvis close to the bone. Some fulness passing up in direction of abdominal tumour. Sound enters upwards and forwards 3 inches, but the body of uterus cannot be felt. When sound enters body it causes some pain. A considerable amount of firm hard effusion is also present on left side of uterus within the broad ligament, especially towards its outer part.

Urine is slightly albuminous, contains blood, pus, and renal epithelium.

On 22nd March, Dr Macdonald made an incision about an inch long over the tumour in the right lumbar region. After careful dissection, the anterior surface of the tumour was bared, and the largest needle of the aspirator introduced into a large cavity, which yielded 4 ounces of pus, mixed with blood. A large drainage-tube was left in the cavity, and its outer end stitched to the edges of the wound. The wound was closed with carbolized silk sutures, and dressed with protective and a sponge.

For two days after the operation the dressings required to be changed three times a day, on account of the quantity of discharge. On the evening of the second day the patient expressed herself as feeling free from pain.

On the seventh day the discharge began to smell badly; the drainage-tube was removed, and ever since the discharge has not been sweet. The patient's condition improved after the operation, she felt free from pain, and acquired a good appetite; but from the 6th April there has been an evening rise of temperature and diarrhœa present.

Patient is still in hospital, and the wound made is now a sinus discharging a thin serous fluid, with some flaky pus.

This patient ultimately succumbed to an exhausting diarrhœa, apparently due to waxy or tubercular disease of the bowels.

No examination of the body was allowed.

The above case seems to me to be one of those that have been called remote parametric abscess. By this term is meant an abscess in any part of the abdomen which has originated in inflammation of the connective tissue within the pelvis. This latter may have disappeared entirely, or the connecting chain of inflamed tissue connecting it with the focus of origin may have disappeared. In this patient's case we had history pointing to pelvic inflammation, and borne out by evidence of some pelvic thickening. Then we had the appearance of a hypogastric tumour, which ultimately extended upwards towards the right kidney, disappearing from its lower position. This is precisely the kind of history which a phlegmon of the connective tissue, either behind the right broad ligament or extending upwards behind the peritoneum in the line of the ureter, would present. I felt at first inclined to perform abdominal section with the view of more clearly establishing the connexion of the mass and removing it. But the feeble condition of the patient, and the manifest inflammatory condition of the mass leading to a certainty of extensive adhesions, impelled me to adopt the method of incision simply. This was not particularly easy, as the mass lay very deep and was difficult to reach. Ultimately it was successfully accomplished, and we hoped improvement would follow. But, unfortunately for our patient, the supervention of an uncontrollable diarrhœa at last exhausted her strength and baffled our every endeavour.

In addition to the cases written out above, there were the following treated in the ward during the same six months:—Mastitis (1); defective development of uterus (1); retroversion (2); vaginitis (2); phlegmasia dolens (1); hæmorrhoids (2); anticurved uterus (1); hysteria (1); ovaritis (3), one of the three ovaritis cases was double and of gonorrhœal origin, another was also double; cardiac disease (1); pregnancy (1); perimetritis (1); sarcoma of uterus (1); torn perineum with uterus retroverted (1). But the circumstances connected with these cases during their stay in the hospital were not, in our opinion, of sufficient interest to warrant an extended notice.

III.—DIABETES MELLITUS: SKIM MILK TREATMENT.

By J. LINDSAY PORTEOUS, M.D., F.R.C.S.E.

THE treatment of diabetes mellitus with skim milk does not seem to have gained the attention it deserves. There is a tendency to stick to the treatment in vogue for years, viz., gluten bread, green vegetables, lean meat, etc., along with codeia, opium, bromide of potassium, liquor potassæ, and such like medicines.

No doubt opium and codeia do, to a certain extent, exercise an influence in reducing the amount of sugar, but in my experience bromide of potassium, which was much talked of for a time as acting on portions of the nerve centres, the supposed origin of the sugar, is utterly valueless.

Skim milk diet as recommended by the late Dr Donkin has, in my hands at least, proved very successful. To do good, it requires resolution and much self-denial on the part of the patient to throw aside all the good things of this life, and live on skim milk, and nothing but skim milk. At first the patient eagerly catches at the chance of relief from the excessive thirst, parched skin, and other tortures, and steadily determines to take the skim milk, but, as a rule, on the fourth or fifth day he begins to tire of it, and in fact, as in one case under my observation, the sight of it made the patient vomit. Fortunately in some cases a little kindly encouragement helps him to overcome his dislike, and with renewal of the remedy a cure is effected. I have seen much good, but never a cure by the codeia treatment. The drowsy and languid feeling which it causes, are sources of great annoyance and depression to the patient. The sp. gr. and sugar are often decreased by it but the latter never entirely leaves. The same remarks hold good with regard to opium.

Of late I have had several cases of diabetes mellitus under skim milk treatment, but in none have I been able to obtain such exact particulars as in the following:—

The patient, a most intelligent man, 49 years of age, a station-master, was first treated for diabetes mellitus in the Royal Infimary of Glasgow as an in and out-door patient for a period of about five months. During that time he took from gr. 2–gr. 3 of codeia daily. This treatment was continued with little intermission after the patient left Glasgow for over two and a half years, alternately with bromide of potassium, salicylate of soda, chlorate of potass, and strychnia, as also one pint of cod-liver oil per week. His diet consisted of beef or mutton (lean), eggs in any form, gluten bread, fish, and green vegetables. Under this treatment the sugar was reduced, but never entirely left.

On the 25th of February of this year all medicines were "thrown to the dogs," and a skim milk diet rigidly enforced. The urine on that day was as dark as logwood, when treated with liquor potassæ test; on the fourth day of this treatment, by the same test, the urine was like dark sherry, which daily grew lighter in colour, till on the 15th March there was a mere trace of sugar. I may mention here that sugar was found always in larger quantities at 6 A.M. than any other time of the twenty-four hours.

During the week ending 22nd March, sugar was found on two occasions at 6 A.M. During week ending 29th March, sugar was found again on two occasions at 6 A.M. The patient attributed this to the fact that the cream had not been taken thoroughly off the milk.

Week ending 5th April, sugar was found on one day only at noon, by Trommer's test. It is difficult to give a reason why it should have been found only at noon of this particular day, as there was no difference in the diet nor in the work of the patient. Week ending 12th April, no sugar was found. To satisfy himself the patient went to the Edinburgh Infirmary on the 23rd April, and again on the 28th of May, and had his urine tested for sugar, but not the slightest appreciable quantity was found, nor has it again appeared up to this date.

From the 19th April up to the 21st of May, two pints of curds were taken as well as the usual quantity of skim milk. On the 22nd the patient had in addition to the above, two soft boiled eggs, and the same diet again on the 25th and 26th, without any bad effects.

The patient was from the commencement of his illness excessively thirsty, his mouth so dry and parched that he could not articulate in the morning. He never experienced any inordinate desire for food, but could always eat heartily. Shortly before the skim milk treatment he felt a numbness in the thighs, and "a soreness in the shin bones," which annoyed him very much. His vision was also impaired from the first, but gradually got worse. He walked with difficulty a few hundred yards, never perspired, his skin dry and parched and scaly, especially the forehead. All these symptoms have entirely vanished. His step is as elastic as a lad's. He can walk half a dozen or more miles without the least fatigue. He perspires freely on little exertion, can read or write for hours without any inconvenience, and the haggard, careworn look has given place to a healthy and fresh hue.

From the tabulated form appended it will be seen how, under the skim milk treatment, the sugar and sp. gr. gradually but surely decreased, and how the weight steadily increased until he is now fully five pounds heavier than ever he was in his life.

	Date of exclusive milk diet, commencing	Quantity of skim milk daily taken.	Urine voided in 24 hours.	Specific Gravity. Average.		Weight.	
		Pints.	Pints.			St.	lbs.
	22nd February 1884	5	12	1·038	Daily.	9	6
	25th „ „	8	10	1·030		9	6
	27th „ „	8	10	1·025		9	6
	28th „ „	5	10	1·018		9	6
	29th „ „	8	9	1·016		9	0
	1st March „	5	10	1·012	Weekly.	9	2
	8th „ „	8	8	1·013		9	4
	15th „ „	8	8	1·015		9	4
	22nd „ „	8	8	1·014		9	8
	29th „ „	8	7	1·015		9	10
	5th April „	8	7	1·016		9	12
	12th „ „	8	7 to 8	1·016		9	12
2 pints curds additional.	19th „ „	8	7 to 8	1·015		9	12
	23rd „ „	8	7 to 8	1·015		10	2
	3rd May „	8	6 to 7	1·016		10	2
	10th „ „	8	6 to 7	1·014		10	2
	14th „ „	8	6 to 7	1·018		10	3
	21st „ „	8	6 to 7	1·018		10	3
	24th „ „	8	6 to 7	1·020		10	3
„	2nd June „	...	...	...		10	5

IV.—THREE CASES OF CÆSAREAN SECTION.

By Surgeon-Major **Arnott**, Bombay Medical Department.

(*Communicated to the Edinburgh Obstetrical Society, 12th March* 1884.)

The conditions under which in India we treat disease, or carry a patient through the dangers of parturition or of operative midwifery, are widely different from those which obtain in this country. In some respects they are favourable, but, on the whole, I think we have more difficulties to contend with than fall to your lot here. Among favourable conditions may be mentioned the life in the open air, and with plenty of light, which the warmth of the climate renders not only pleasant but necessary. Among the poor at home, especially in large and rapidly growing towns like Glasgow, but more or less in all towns, health is gradually but surely deteriorated by overcrowding in houses which are badly or not at all ventilated, and in which light also is deficient. In India, in Bombay, for instance, a large, busy, growing town, with extensive commerce and manufactures, and therefore in many points similar to such towns as Glasgow, Liverpool, and Manchester, there is much overcrowding and much poverty; but the warm equable climate invites you to open every window and door to admit the air fresh from the sea in every possible way, or better to leave the house, and spend as much time as possible in the open air. I do not doubt that among other things to be presently mentioned, to this open-air life is largely due the comparative healthiness of Bombay, and the absence among the children of the poor of the extreme prevalence of scrofulous diseases which characterizes that class in manufacturing and commercial towns at home. The generally temperate life of the people, and especially of the women, the simple life, and possibly the nearly exclusive use of a vegetarian cereal as diet, and the generally calm apathetic character, are favourable, to which must be added in Bombay the advantages of an excellent water supply, as good nearly as Loch Katrine, and an admirably worked health department, which two latter are among the many blessings which the enlightened, and benevolent, and unselfish British Government endeavours to carry into every part of India.

But, on the other hand, we have unfavourable conditions in the prevalence of a syphilitic taint—in the effect of malaria, to which the great majority of our patients have been subjected—in the very frequent presence of scurvy, or of some other form of "poverty of blood," to use a trite phrase, caused in the one case by an insufficient supply of fresh vegetables and fruits, and in the other by insufficient nutrition owing to poverty, and this latter not infrequently amounting to semi-starvation—and, finally, from the influence of the causes above alluded to, and the enervating and debilitating action of the climate for generations, the native has less vital force, and the lamp of life is in her more prone to flicker and die than in the hardier and more robust European. In these general causes may be added, in the case of midwifery operations, the great prevalence of osteomalacia in Mohammedan women, which I hope to have an opportunity of bringing before the Society on a future occasion in connexion with cases of craniotomy; and last, and most important, the unfavourable condition in which patients are brought to us, having generally been long in labour, and under the injurious treatment of native dhais, or midwives.

I must ask your indulgence for the very imperfect description of two of the cases of Cæsarean section. At the end of

January I wrote to Bombay for the original cases, but they have not arrived. The other case is not so well detailed as I could wish, being written by native students; and though creditable to them, is not so good as I should like to place before you. The post-mortem examination, also, in two of the cases was done by students, because natives object so strongly to these examinations, that if they had waited my arrival there might have been no examination at all. They always wish to remove the body as soon as a case is hopeless, or as soon as death occurs.

My first case occurred in 1879, and I give the following chiefly from memory:—J. K., age 26, Hindu (Bunnia), married, multipara, has had two children born at the full time, and mollities ossium came on after the birth of the last. Was admitted on September 3rd, 1879. I do not remember precisely how long she had been in labour, but it was some considerable time. She was a woman in a very cachectic condition, and had a very copious eruption of syphilitic rupia; there were also specific sores on the genitals. The pelvis was extremely distorted in all its diameters, and it was obvious that the child could not be extracted by craniotomy or cephalotripsy. After consultation with my colleagues Dr Cook, the Principal of the College, and Dr Blanc, the Senior Surgeon, I determined to perform the Cæsarean section. I had not a spray producer, but carbolized lotions were used and antiseptic dressings. The operation was performed in the usual way, and with the usual preliminary precautions, Dr Blanc assisting me. Chloroform was used. All hæmorrhage was checked before opening the peritoneum, which was then incised. The uterus was then steadied by an assistant, and I rapidly incised it, seized the child, extracted it, tied and cut the cord, and gave it to an assistant previously warned to take care of it, and it soon began to cry lustily. When I had completed the uterine incision, Dr Blanc seized the edges of the uterine wound, placed them in contact with the external parietal wound so as to prevent effusion of blood into the peritoneal cavity, while the same manipulation checked hæmorrhage. Having given the child to an assistant, I removed the placenta and membranes, and cleared the cavity of the uterus of clots, etc. Uterine action was now induced by pressure and the administration of ergot, the uterine wound sutured by silver sutures, all blood, etc., sponged out of the peritoneum, and the parietal wound sutured also by silver wire, and finally dressed and bandaged. All went well for four or five days, but her health was so bad, and she was so syphilitic, that I feared unhealthy action, which sure enough occurred; the lower part of the wound suppurated, there was some peritonitis, and a violent diarrhœa occurred, under which she sank on the 12th, nine days after the operation. The child did well.

My second case, admitted on Aug. 25th, 1882, was as follows:—

Cæsarean Section.—K. D., æt. 25, Hindu (Deccan, Mahratta);

residence, Byculla; birthplace, Sattara, Deccan; was admitted into the Sir Jamsetjee Jejeebhoy Obstetric Institution, Bombay, at 6 P.M. on 25th August 1882. She had completed the ninth month of her fourth pregnancy. Her first parturition, a normal one, occurred about eight years ago, and was followed by pains, as she said, all over her body. Her second labour, also normal, occurred about six years ago; and after it she again had pains and stiffness of the hip-joints. Her third pregnancy terminated at the seventh month, about a year ago, and since then she has had no particular ailment. In the present labour she first observed labour pains about 4 A.M.; soon after the membranes ruptured; and in the evening, as the case made no progress and her strength was failing, she was brought to hospital.

The patient is much deformed. While walking she is much bent, placing her hands upon her knees, and thus supporting the trunk. When lying down the thighs are flexed on the trunk, and any attempt to straighten them is painful. She is anæmic, and rather emaciated. The pulse is 100; temperature normal; fœtal heart sounds audible, and 136 per minute; slight labour pains occur. On vaginal examination, vertex found presenting, first position, os dilatable, membranes ruptured; pelvis exceedingly distorted and rostrum-shaped; ischial tuberosities so approximated that a finger could not be introduced between them, but posterior to them two fingers could be passed. The brim of the pelvis much contracted, measuring about 1¾ inch in transverse diameter, and somewhat less in the conjugate, but there was some difficulty in determining them. The measurement between the anterior superior iliac spines was 9 inches.

After consultation with my colleagues of the Grant Medical College, Surgeon-Major Bainbridge and Surgeon Hatch, I determined to perform the Cæsarean section, which I accordingly did at 9 P.M., with their kind assistance. The usual precaution of relieving the bladder and rectum having been taken, the patient was placed under the influence of Bryant's anæsthetic, and the operation performed with antiseptic precautions. The abdominal incision extended from about 3 inches above the umbilicus to the same distance below it. Before opening the peritoneum, one or two small bleeding vessels were twisted. The peritoneum was then opened, and a fold of small intestines found between the uterus and the abdominal wall at the lower part of the incisions, which was kept out of harm's way by a piece of sponge. The uterus then being fixed, its cavity was rapidly opened, and the wound extended by cutting with scissors. The placenta was found attached to the part of the uterine wall incised, and as much of it as necessary was rapidly separated, and the child (a male) extracted, and given to an assistant for restoration, and which was fortunately successful. A subcutaneous injection of sclerotic acid (grs. 3) was now administered, and soon after repeated, and at the same time the placenta and membranes separated and removed, and the cavity of the uterus cleaned, the edges of the uterine wound being held in contact with the edges of the abdominal wound to prevent any hæmorrhage into the peritoneum cavity. For a few seconds there was rather free hæmorrhage from the uterine vessels, but under the application of ice to the cavity, of pressure, and also, doubtless, the action of the sclerotic acid, the wound contracted, and hæmorrhage ceased. The uterine wound was now stitched by catgut sutures, and the peritoneum cleaned, and the edges of the abdominal wound closed up similarly. A piece of gutta-percha tissue was then placed over the wound, and over it, in alternate layers, carbolized gauze and oakum, then a piece of mackintosh, and finally a many-tailed bandage. A drainage tube was introduced into the os uteri from the vagina.

The whole operation, including dressings, lasted exactly three-quarters of an hour. The patient bore anæsthesia well, and at 11.30 P.M. was awake; pulse 100, and of a fair volume.

℞ Quiniæ disulph., grs. ij.
Opii, . . gr. iss.

1st Morning after Operation.—For some hours after the operation the patient was quite quiet and free from pain, and was able to take a little bland nourishment, viz., conjee and milk. But towards morning she became restless, complained of much thirst, and the pulse increased in frequency. At 4.30 A.M. she passed some urine. A pill was now given, and she soon after fell asleep, and slept for some hours.

7 A.M.—Temp. 101°; pulse 128; no hæmorrhage.

1st Evening after Operation.—At 9 A.M. the urine was drawn off, and ordered to be done every six hours. During the day she slept occasionally, and did not complain of much pain, but had a little in the loins and at the wound. Was thirsty, and from time to time took nourishment.

Quinine and opium pills. Also a little nitre in tisane.

7 P.M.—Temp. 101°·4; pulse 140; resp. 32.

2nd Morning after Operation.—During the early part of the night was very restless, but became easier towards morning, and very thirsty. Took milk and conjee, also medicine. No pain complained of.

7 A.M.—Pulse 144; temp. 100°; resp. 32.

2nd Evening after Operation.—Passed some urine about 8·30 A.M. Was pretty easy in the forenoon, and slept from 11 A.M. till 3 P.M., when she had a fit of coughing, after which she felt faint, and perspired very freely. The abdomen became tympanitic, but was not painful or tender. Breathing became rather laboured, and cough was troublesome. Urine freely secreted.

6 P.M.—Pulse 140; resp. 32; temp. 99°·6 F.

Treatment and diet continued; also a mixture of chloroform and assafœtida.

3rd Morning after Operation.—The mixture of chloroform and assafœtida caused the expulsion of wind both by mouth and anus, but caused nausea and retching. She was rather restless all night. Passed about 10 oz. of urine in bed unconsciously. Perspired very freely.

7 A.M.—Temp. 101°; pulse 130; resp. 32.

At 10 A.M. Dr Carter, First Physician, J. J. Hospital, and Mr Gray, Senior-Surgeon, J. J. Hospital, saw the case with me in consultation. It was determined, though not unanimously, to introduce a drainage-tube, which was done. On opening the lower part of the wound some healthy serum exuded, and the intestines were seen quite healthy.

3rd Evening after Operation.—During the day she became more restless; had much irritability of stomach, cold sweats, and towards evening her extremities became cold.

At 10 P.M. she died.

Post-mortem nine hours after death. All the viscera healthy; some inflammatory congestion for about two inches on either side of wound; rest of parietal peritoneum and the visceral peritoneum healthy. Uterus about the size of an adult's fist; some inflammation on either side of incision; wound healing kindly. No inflammation in pelvic cavity. About 4 oz. of sanious serum in Douglas's pouch.

The above is an abstract from the somewhat imperfect reports kept by students of the Grant Medical College, Bombay. It was a case of extreme deformity from osteomalacia, and the woman badly nourished, and living in poverty, had been exhausted by being, at least, fourteen hours in labour. There was no difficulty in the operation, and the amount of blood lost was slight,—not more than four or six ounces. On looking over the record of this case at this distance, it seems to me that it steadily went from bad to worse, but at the time I had strong hopes of her recovery; and on the early morning of the 28th (the day of her death) she appeared better; could pass urine voluntarily and freely; could take conjee and milk without difficulty, and the nausea and also the cough which had troubled her appeared to be considerably ameliorated, having been partly caused by the mixture of chloroform and assafœtida. The pulse also had come down a little in frequency, and the patient was more cheerful and hopeful, as I well remember, though these points are not noted in the case. There was difference of opinion as to the propriety of re-opening the wound, and of introducing a drainage-tube, as it was not clear that there was any collection of unhealthy fluids, and the effect of again opening the peritoneum and introducing a tube was feared, but the opinion of the majority was acted on. I am now satisfied the introduction of the tube was injurious; the patient rapidly and steadily became worse, and when I paid my evening visit it was obvious that a fatal result would soon occur, which it did at 10 P.M. Probably a fatal result would have ensued if she had been left alone, but not so soon.

My third case was admitted on 25th April 1883. H. S. C., age 24, married, had had two children, subsequent to which osteomalacia occurred. Labour at the full term commenced on 24th April, and she was admitted on the 25th. She was an extremely feeble, cachectic woman. Os dilated; membranes ruptured; vertex presenting in 1st position; pelvis extremely distorted, no diameter of the outlet being more than 1¼ inch, and the cavity and brim giving hardly a larger measurement. After the usual precautions the patient was placed under chloroform, and the operation performed under the carbolic spray. The operation was performed in the usual way, and as described in a former case; but having tried to do with a small abdominal incision, I incised the uterus rather low towards the cervix, and this caused difficulty in the closure of its wound, which, however, was sutured by catgut sutures, while silver wire was used for the abdominal wound. Before closing the uterine wound its contraction was promoted by subcutaneous injection of sclerotic acid and by the application of ice. The dressing was of carbolized oil on lint, covered by oakum. In this, as in all the other cases, a drainage-tube was introduced into the uterus per vaginam. There was some difficulty in reviving the child, but it cried strongly after about five minutes, and did well. The mother never fully recovered from the shock of the operation; she suffered no pain or distressing symptom such as retching, but sank after 36 hours. No post-mortem was allowed.

The result of the three cases was that three children were saved, and that one mother lived into the 10th day, one lived almost exactly 3 days, and the third 36 hours.

It is, of course, unsatisfactory that in all three the mother died, but I hope for better results in the future.

I present these cases for the consideration of the Society, and solicit opinion as to the comparative merits of Cæsarean section, and modern modifications of it; also as to best kind of ligatures, sutures, and dressings, the best anæsthetic, and the circumstances which at the time of the operation, or subsequently, would demand the introduction of a drainage-tube, and of what kind. I have not yet had an opportunity of seeing or even of reading about all the latest improvements in antiseptic surgery, and the valuable and weighty opinions of the Members of this Society will guide me if on my return to India similar operations fall to my lot.

V.—ANERGIC STUPOR.

By Thomas W. Dewar, M.B., C.M.

The following case came under my charge on Wednesday, 10th September. A message was left, about 5 P.M., that the girl had fainted. I was unable to attend till 7.30, when I found her in bed, breathing quietly as if in a sound sleep.

M. D., aged 25; unmarried; works in dye-works. Her father died, aged 40, of consumption. Her mother is alive and well, aged 50. Six brothers alive and well; three sisters dead, causes unknown; three living. Of the three living, two are weakly. There is no history of epilepsy or mental disease in her own or her parents' families. She had measles at nine and whooping-cough at three years respectively. She never had a fit. When an infant she had a swelling below the left mastoid process, which eventually suppurated. Several times since a swelling has reappeared here, but has always resolved. Habits temperate. She is thin and pale and has been losing flesh of late.

She does not remember much of her early life, and available sources of information are quite unreliable. When I found her she was pale, but not unnaturally so. She had been ailing for about three weeks before this. Stomach out of order and sick headaches. Though disinclined for any work, and lacking interest in anything, she had remained at work till Monday, 8th September. For a day or so before the 10th she had some darting pains in the left side and over epigastrium, which I considered intercostal neuralgia, there being no evidence to lead to another conclusion. On the 9th she took to bed, knitting most of the day. She was not depressed mentally. On Wednesday, between 4 and 5 P.M., she said she thought she was going to faint, sank back in bed, and lapsed into the condition in which I found her two hours and a half afterwards. She groaned occasionally, and moved her head sometimes from side to side. Her expression was anxious and distressed. Eyelids closed; pupils dilated, regular, sensible to light. Tapping the head, shaking her, and shouting in her ear, produced no change. There was no catalepsy. Reflexes and sensibility to pain quite natural. She could swallow perfectly well, but seemed to dislike being disturbed. Her temperature was 98°·6; pulse 76, regular, well filled between the beats, and of fair tension. Circulatory system natural. Breathing a little harsh at both apices. Menstruation has never been missed, is fairly regular as regards time, but sometimes rather abundant. On raising her and shaking her she remained as lethargic as ever, paying no attention to anything that was said or done to her.

11th.—She remains in much the same state. Temperature, 98°; pulse, 80, regular, subsiding somewhat rapidly. Hands and feet quite warm. Tongue very foul still. Beef-tea and brandy were administered. In the afternoon she was in much the same state. She groaned occasionally, and put her hand sometimes to her left side and sometimes to the left side of her head. A mustard blister was applied to the side, and a poultice with mustard to the head. After a time the groaning ceased, and she became quiet as formerly. She rose several times to-day and micturated voluntarily.

12th.—Condition much the same as yesterday. Tongue very foul. Aperient administered. She vomited soon after this, but sufficient was retained to have the desired effect, as she had a motion in the evening, rising voluntarily and completing the act, her eyes, however, remaining closed. She micturated properly several times to-day.

13th.—She remained in the same lethargic state till late in the afternoon, when she called out that she was drowning, and again became silent. These were the first words she had spoken for three full days. This evening, after being well shaken and shouted to, she gave some incoherent answer to the questions of "How she felt" and "Where she was?"

14th.—To-day, on being asked "What she did?" she replied she was a machinist. (A machine stood by her bed-side. The reply indicated awakening consciousness to external impressions.) On asking her who I was, she said Mr Allan (the master of the dye-works in which she is employed), and then mumbled something about getting her work done before the clerk came round. She became more intelligent this evening.

15th.—Monday she was up, and looking quite better. She is a bright, intelligent girl, and of a lively disposition. She complains much of a pain in her head, starting at the vertex and passing down behind the left ear. It is so severe she cannot touch it, nor bear the weight of her hair on it. She positively affirms that she remembers nothing that occurred since Wednesday afternoon. The first thing she remembers was my pinching her, which, she says, was very painful for a long time after. The pinch was quite small. Of the reality of the stupor I have not the slightest doubt; for on two occasions when I visited her, her mother and sister—the only other occupants of the house were out—and I found her in the state I have just described, and by no effort could rouse her. Seven years ago, on the death of her father, she says she had an attack of the same nature. On that occasion the stupor lasted longer. Her mother affirms that she had similar attacks frequently before that, but her version of facts which came personally under my own observation leads me to set little value on the statement. She is getting chemical food, arsenic, strychnia, beef-tea, etc., and improves daily.

The interest of the case lies in the circulation remaining natural and efficient, the calls of nature being recognised as by an intelligent being, and the reflexes and sensibility to pain remaining natural also.

VI. — PRESIDENTIAL ADDRESS AT THE TWENTIETH ANNUAL MEETING OF THE NORTH OF ENGLAND BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

By JAMES MUNRO, M.D. (Edin.), Barnard Castle.

(*Continued from page* 421.)

THE ASPIRATOR has, on the whole, been less useful in practice than I anticipated, and the results for success disappointing as a completely curative agent, but yet useful for tentative and palliative purposes.

CHLORAL HYDRATE.—Chloral has been a great boon and reliable hypnotic, but is, unfortunately, now much abused by some patients who have become addicted to its too frequent use on their own account. I have lately administered it in smaller and more frequent doses than I did at first, as it is not so safe in some states when given in large doses. My experience of croton-chloral in neuralgia of face and neuroses is disappointing, and therefore believe that its virtue is greatly exaggerated.

NITRITE OF AMYL.—I have only of late years come to use nitrite of amyl much, and found it invaluable in some convulsive and spasmodic affections (especially the latter); and particularly in some forms of angina pectoris I cannot speak too highly of its use for effectually and speedily allaying the attacks, but not for preventing them.

Angina pectoris is a generic term, and it arises from different causes in the heart and vessels, etc., and in some forms of angina I have found nitrite of amyl very trustworthy for relieving, and in others not at all—the least, I thought, when arising from fatty degeneration and weakness.

SOLUTION OF NITRO-GLYCERINE.—This remedy has only been introduced the last few years, and I have used it chiefly in angina pectoris, as I have had several cases; but unfortunately this remedy has not come up to my anticipation and expectations from the writings of Dr Murrell. I have had it from different manufacturers and of different strengths, but still it did not appear in my hands to produce the nearly specific effects ascribed to it (when given for some little time) for warding off angina pectoris, so that I have not found it nearly so reliable in preventing attacks of angina as nitrite of amyl in relieving them.

Passing on next to PILOCARPINE.—The active principle of jaborandi has also been introduced into practice the last few years, and I have found it one of the most valuable additions to our therapeutic agents, and have used it pretty largely, but did not observe much benefit from jaborandi itself—in fact, I was disappointed with it. My experience of pilocarpine is that it is a powerful diaphoretic, diuretic, and stimulant to the salivary and bronchial secretions, less so to the intestinal. I have used it in asthma in accordance with the directions of Dr Berkhart, and in some cases it very speedily relieves after hypodermic injection, commencing in a few minutes to cause profuse perspiration, and the salivary and bronchial mucous membrane secretions likewise flowing freely, and thus the tightness and oppression of breathing from asthma speedily subsiding. It is also of immediate benefit in suppression of urine, in deficient renal action, in uræmia, and in obstinate and long-continued anasarca (depending more on cardiac than renal disease) when other ordinary means had failed, and this has acted quickly and effectually, sometimes after a few injections, so that I cannot speak too highly of it in the aforesaid affections.

SALICYLATE OF SODA.—Salicylate of soda is also a recent and important addition to the *Materia Medica*, and now the most reliable means we possess for diminishing the fever in acute rheumatism, and thus it indirectly relieves the acute pain by lessening the fever, etc. It is a powerful and rapid diaphoretic and antipyretic, even in ordinary or simple pyrexia.

I have latterly prescribed it generally alone in rheumatic fever, or sometimes in combination with citrate of potass; and usually in average and tractable cases I have noticed the fever to subside in a few days—generally in a half or one-third of the time it previously did; only it requires to be continued in smaller or less frequent doses for several days after the fever has terminated, or there is a liability to relapse of fever.

In simple pyrexia I prefer it to, and have found it more reliable and speedy than quinine in lowering the temperature; but no doubt its *forte* is in acute rheumatism, and, like many new, powerful, and important medicines, we must observe and tabulate carefully for years to come its effects, so as to form adequately a true estimate of the remedy.

ELECTRICITY.—In its different forms I understand rather better now than I did when I commenced practice, and use it more advantageously in appropriate cases, and the results I have obtained lead me to conjecture that, without doubt, it wil by-and-by be an agent that will be more extensively used in nervous diseases especially and their effects.

HYPODERMIC INJECTIONS of various kinds we have practised of late, more than formerly, and found them more prompt and reliable (than administration by the mouth) and less after effects from these strong remedies, and one thinks this form of administering powerful agents will increase, especially in cases that are difficult and idiosyncratic in management, and that can be watched closely.

ANTISEPTICS.—No unprejudiced person can doubt their great utility, their power to diminish or prevent sepsis, their arresting the discharge and promoting the healing process in severe surgical operations, and rendering them safer; and in a great measure preventing pyæmia and septicæmia.

Dangerous operations are now performed successfully with their aid that formerly were not considered safe to be undertaken, such as opening into joints, necrosed vertebræ, etc.

It is not now an open question that, with their help, not only have some operations been rendered safer, and their after effects less, but that they, or the principles inculcated, or Listerism, have been a great means of contributing to success, and the diminished mortality from operations and wounds both directly and indirectly.

DISEASES.—I will now pass rapidly, in review, the main facts and statements with regard to the diseases most frequently I have had to treat here for the last quarter of a century, and the result of observation and treatment in relation thereto.

DYSPEPSIA.—The various forms of dyspepsia are the most frequent complaints that have come under my notice, and with the exception of the varieties of dyspepsia arising from catarrh of the stomach or bowels, for which I usually have administered alkalis, bismuth, and soothing remedies for a time, generally in atonic dyspepsia I prescribe mineral acids in a bitter tonic infusion, or with nux vomica, much more frequently than I formerly did; and in the irritative forms I have found nothing so good as bismuth in large doses and non-irritating food.

I think, with Dr Clifford Albutt, that many so-called cases of dyspepsia are neuroses of the stomach or bowels, and should be treated accordingly. In fact, the neurosis is only the local expression of the general diathetic state, and the diathesis should therefore be treated, and not the simulated dyspepsia.

Passing on to ANÆMIA.—This is probably the most frequent complaint I have met with in young females, but indeed, in all ages in the fair sex; and although it may arise from several or accidental causes, yet we think it is very often hereditary; and although relieved or cured by the various forms of iron and other tonics, still patients of this class often relapse to their former anæmic condition, and we have them returning after a shorter or longer time with the same complaint.

I have not found any of the chalybeate preparations as effectual and reliable as the tincture of the perchloride of iron, and it is sure to be efficacious when there is deficient hæmoglobin in the blood, and sufficient blood corpuscles formed; but other varieties of anæmia have a deficient formation of blood corpuscles, and iron is then not so useful in this form as arsenic. This is the main therapeutic distinction between the two kinds—(*a*) deficient formation of corpuscles, (*b*) and deficient hæmaglobin and plenty of blood discs. There seems to be an inherent debility and incapability in the blood-forming glands to form sufficient chyle and blood from their food; hence the frequency of the recurrence, and thus their normal state really requires every now and then iron in some form added to their food to maintain them in perfect health.

Anæmics do not frequently become consumptive, or necessarily so, according to my observation.

PERNICIOUS ANÆMIA.—I saw a few cases several years ago, and before the days of the clinical thermometer, and they were chiefly in men, and I was so surprised and disappointed with the results of treatment, that the various forms of iron preparations had little or no effect on the course of the disease, and no organic disease that could be detected, that at the time I was surprised and puzzled; but not knowing its nature, pathology, or its high temperature, or the effects of long-continued arsenical treatment, they all died. I have not lately met with a case of this disease.

SENILE ANÆMIA.—I have seen many well-defined cases of simple senile anæmia, and although they may be slightly benefited for a time by chalybeates, still they soon relapse, and gradually fade away and die irrespective of all treatment. In them, probably, the blood supply has been drawn on in excess of supply, and so used up, and gradually exhausted, or the blood-forming glands have failed in their functions and duties, and cannot supply enough of the vital fluid—probably the former is the truer explanation of the cause — that the blood as a tissue has begun to fail—senile failure similar to that in an organ.

PYREXIA.—Next to the two chronic disorders just alluded to, one of the most frequent acute affections having for several years come under my notice has been the so-called simple pyrexia, designated by others febricula. This febrile attack may arise from various causes, such as over fatigue and heat and disorder combined, or perverted or retained secretions, in combination with the above-named causes, or sudden chills acting on the supposed heat centre of the nervous system, or, perhaps, in some cases, from slight poisoning with micro-organisms, or, lastly, probably from modification of the continued and typhoid fever-poisons under certain conditions; and some authorities believe that many cases of febricula are abortive or irregular forms or modifications of the continued fevers, from having had a slighter dose of the exciting cause, etc.; but, as far as my observation extends, I never knew a case of so-called febricula communicate infection to any other inmate in the house, or to the nurse, or any second case arise from the first, so that, apparently, it is simple and non-infective, according to my experience. Simple pyrexia—no complication or organ affected at the outset—as a rule, subsides in from four to seven days, and although the temperature and pulse may be frequently high, yet the patient presents no look of poisoning usually, and apparently, one or other of the causes I have enumerated (cold predominating) has operated on the heat centre, causing the febrile process.

Whether ephemeral fever occurring in children is related to febricula I am unable to say, but it would appear separate, and as if there were some peripheral irritation acting on the *vaso-motor* centre.

Frequently I have noticed single lobar pneumonia to occur during, or, rather, near the termination of the febricula, without any symptom showing itself whatever, and only discovered by examination of the chest, all negative but the physical signs; and my own observation would lead me to infer that the pneumonia has a relationship, and belongs to the febricula, not merely a sequence or complication, and that when this exudation has taken place into the air-cells, the temperature very soon becomes normal, similar to slight cases of eruptive fevers when the rash has appeared. Perhaps it may be discovered by-and-by that this form of febricula is caused by micro-organisms, and that they will be discovered in the blood and lung, only I have not observed it communicable from one person to another.

I daily in simple pyrexia or febricula examine the chest, and look out for simple or single lobar pneumonia after three or four or more days of fever, and it occurs in a certain proportion of cases, and my impression is that it is a local manifestation of this febrile state, and not exactly a complication or requiring special treatment. This pneumonia does not produce hurried respiration of any moment, nor anxiety of countenance similar to so-called primary pneumonia, and usually, with rest in bed and supporting treatment, it completely disappears in a few days.

I have not found quinine or salicine of so much use in this form of pyrexia, with high temperature, as salicylate of soda, either single or combined with diaphoretic salines, or with tincture of aconite, or in other cases with digitalis; and I have rarely observed any other complication in simple pyrexia than the one I have just alluded to—sometimes slight bronchial catarrh succeeds to it.

In the causation of febricula or pyrexia, bronchitis, or some cases of pneumonia, there must be, I believe, some other influences at work, viz., telluric, atmospheric, electrical, or some modification of ozone in addition to cold or heat or fatigue, excepting the cases that possibly may be caused by micro-organisms. During the severe winter here four years ago, after long continued severe cold (the temperature under zero once or twice), simple pyrexia was common, but bronchitis was most frequent; and as far as my notes and memory serve me, scarcely a case of pneumonia occurred in my practice at that time, so that I am inclined to believe that there must be some subsidiary exciting cause in addition to, or aiding cold in producing the above-named diseases (especially pneumonia); and I am more and more convinced that it is not cold alone always that is the exciting cause. I may here, in passing, introduce an appropriate case lending probability to this theory—I have a patient about 60 years of age now, and who has been upwards of 35 years in bed, and whom I have attended for 18 years. Her bedroom, upstairs, is always kept, night and day, summer and winter, nearly equable as regards temperature (as the fire is never allowed to go out entirely except in hot weather), and she got a severe attack of bronchitis, a few years ago, in the summer, and I scarcely saw a worse case recover than she had, and she has, occasionally, minor attacks of bronchial catarrh still, and severe coryzas. She has no cardiac disease, and the sanitary surroundings are good; but she is thus exactly affected as regards contracting bronchitis, to what any delicate person going about in the open air would be.

BRONCHITIS.—We have generally found bronchitis one of the chief causes of death in old people, and in our cold, damp, and variable climate it is very frequent amongst the infirm and aged.

Of late years, the steam kettle and greater care in ventilation, and keeping the temperature of the bedroom constantly from 62 to 65 degrees Fahrenheit, along with heat to the chest, and supporting treatment carried out by efficient nursing—all these measures combined have helped in diminishing the mortality from this insidious and dangerous illness.

I now use expectorants comparatively little to what I did 15 or 20 years ago, excepting for the first three or four days; after that chiefly diaphoretic salines with digitalis. I have not observed so much benefit generally from direct inhalation of steam from an inhaler, or from medicated steam, as from steaming the air of the room well and frequently.

Acids, strychnine, and sometimes tincture of perchloride of iron in the chronic stages, have proved beneficial in bracing up the relaxed bronchial mucous membrane, and improving the general health, combined with changes of air.

(*To be continued.*)

VII.—STUDY OF A FORM OF ALBUMINURIA.

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(*Continued from page* 433.)

CHAPTER II.

The Relation between the Ingestion of Food and Albuminuria.

THE effect of an albuminous alimentation on the quantity of albumen present in the urine of albuminurics has been noticed for a long time now as increasing the amount of this principle present after meals. M. Gubler made a communication to this effect to the Société de Biologie in 1853. Parkes drew attention to it in the *Lancet* in 1852 and 1854. M. Luton, in his *Études sur l'Albuminurie*, Paris, 1857. Pavy, also, in 1863, in a paper in the *Lancet*, entitled "Assimilation, and the Influence of its Defects on the Urine." But all these reports had reference to the existence of augmentation of the quantity of albumen after nitrogenous food, in individuals who were already suffering from persistent albuminuria. But within the last year or two attention has been drawn by various writers to the existence of an intermittent form of albuminuria in men otherwise apparently healthy. In many cases it being discovered merely by accident, owing to a habit of always examining the urine of every patient that might present himself from any cause, however slight, and in many cases its presence being as much a cause of surprise to the medical man as to the patient, until, as in the case of Sir Wm. Gull, its frequent presence in a certain class of cases ceases to excite either astonishment or alarm, and causes the question to be asked, "What worth were mere statistics of albuminuria since it occurred in young men and growing boys almost as frequently as spermatorrhœa?"

Other cases of occasional albuminuria occur than those immediately after the ingestion of food, as, for example, in those reported by Leube, by Edlefsen, and by Fürbringer, where it was present more in connexion with exercise than with the digestive process. But the cases given in this paper, and which are all those which up to the present date have been reported, as far as I have been able to discover at least, with the addition of two or three non-published ones which have come under my own personal observation, have reference to post-cibal albuminuria.

The first cases given in detail are those by W. Moxon in the *Guy's Hospital Reports*, 1878, xxiii. p. 233, in a paper entitled "On Chronic Intermittent Albuminuria."

Besides the cases given more or less in detail by the above author, a few isolated and undetailed facts have been reported from time to time in the different medical journals, all bearing on this subject, some of which are as follows:—

In a clinical lecture given at the London Hospital by Sir Andrew Clark, he says, "I knew a case in which albumen occurred in the urine daily for several months, but it was only present in the urine passed after breakfast, and was never, to the time of its departure, present at any other time." He also writes as follows:—"Albumen in small quantities, and unaccompanied by casts, may be present in the urine daily for three years, and at last permanently disappear. This occurred in a case under my observation. The health, which had previously been bad, rapidly improved after the disappearance of the albumen from the urine, and became ultimately very good.

In the *New York Med. Journal*, 1880, Dr Smith mentioned the case of a medical friend who could produce in his own person albuminuria, lasting eight or ten hours, by drinking a pint of milk.

M. Claud Bernard, after having eaten several hard boiled eggs, found his urine albuminous. M. Bareswill was also rendered albuminuric by swallowing ten whites of eggs. Dr Bradbury had frequently been consulted by undergraduates suffering from albuminuria of an intermittent nature, and in a large proportion of the cases it only appeared after breakfast. In one case, which came under his observation, it only occurred after eating one particular form of food, viz., boiled beef.

M. Marcacci of Florence, in the *Imparziale* 1878, after numerous examinations, came to the following conclusions:—

1. The constant absence of albumen in the urine of the night.
2. The very rare absence of albumen in the urine of the day, and then only at the hours furthest removed from the repasts.
3. When the albumen was absent it was easy to make it reappear, on indulging in a moderately active exercise sufficient to increase, notably, the number of the pulse.
4. The absence of all varieties of tube-casts, epithelial or others.

M. Labadie Lagrave, in the *Nouveau Dict. de Chirurgie et Méd. pratique*, gives, while speaking of the same class of cases, the following case:—J'ai eu moi-même l'occasion d'observer il y a cinq ans un fait à peu près analogue chez un riche négociant de la capitale, qui depuis plusieurs années présentait une albuminurie intermittent, qu'il avait vainement essayé de combattre par les traitements les plus divers. Le malade, à peine agé de 44 ans, présentait d'ailleurs les attributs de la santé la plus parfaite et ne se plaignait que de douleurs lombaires. Après avoir inutilement soumis à une cure lactée pendant trois mois, et suivant l'avis éclairé du Prof. Jaccoud, je conseillai à mon albuminurique d'abondonner tout traitement et de reprendre ses occupations. J'ai pu récemment constater que la santé de mon client n'a subi aucune atteinte de cette longue suspension de tout moyen thérapeutique."

The following selections of cases are those given by Dr Moxon, and they form the most complete account of this malady yet published:—

"CASE I.—The first case is that of a man who was cured of his renal complaint when I saw him for the first time in connexion with an abscess of the liver, a disease for which I treated him during four months. He had often violent fever. The urine was examined frequently, but never contained a trace of albumen, so that we can consider that at this epoch his kidneys were rather above the usual standard. However, Sir W. Gull, with whom I had a consultation about this patient, recalled the fact that he had treated him some years previously when he was suffering from albuminuria, and he was kind enough to supply me with the following note upon the condition of the urine at that period:—'*3rd Jan.* 1878.—I have examined my notes upon C.'s case, and find that he had a urine of a pale amber colour, clear, of a specific gravity varying from 1019 to 1022, and albuminous in a varying degree. He had no dropsy, and none of the other symptoms which usually accompany albuminuria. This latter fact would not have been recognised but for the habit of constantly examining every urine. I have so often found albumen in the urine of young men, aged from 16 to 22 years, that I consider that this is a common symptom, and I have attributed it to the atony of vessels and nerves; and, in fact, the urine is normal in every other respect. When Dr George Johnston gave me a list of 288 cases of albuminuria, I remember asking him what importance one could attach to simple statistics of albuminuria, since it was met with in young men and growing boys almost as often as spermatorrhœa.'"

"CASE II.—The following case is that of a brother of this young man (Case I.), who was brought to see me by his father; he was 19 years old. The patient himself was not at all inclined to complain of his health, and was rather disposed to consider the visit as unnecessary. Nevertheless he was said to be languid, especially in the afternoon. He was a divinity student at one of the universities, and had distinguished himself in his studies. His memory and mental faculties were in a satisfactory condition. He admitted that occasionally he suffered from headache, which, with slight constipation, formed the total of his complaint. He had no pain in the back and no dropsy. He was tall, thin, of a dark complexion and nervous temperament. The development and condition of the vital organs were satisfactory; there was no irritability of the bladder. The urine was acid, pale in colour, it contained a moderate quantity of albumen, which at once appeared as a bluish cloud when nitric acid was poured down the side of the test glass until there was a layer of it at the bottom of the glass. In the untouched urine, when it had cooled, a cloud appeared which contained a quantity of crystals of oxalate of lime and of mucous threads, of which some were almost as distinct as hyaline tube casts. Nevertheless I could not discover any tube casts. (On searching very carefully during a considerable time I found three or four hyaline casts.) The specific gravity varied from 1016 to 1022. Albumen was not invariably present, but in nearly all the specimens there was a little.

"At this period I had not the custom of making notes in these cases upon the variations in the urine at certain hours of the day, so that I cannot say at what particular time of the day the albumen was present or absent.

"I saw this patient at intervals up to within the past nine months.

"I noticed that the albumen had completely disappeared in seven months from the first time that he consulted me; but two years later he had some symptoms of renal calculus, and passed some small oxalate of lime stones. At this period there was a little hæmorrhage; and now, from time to time, he has symptoms of calculus in the right kidney; but a curious fact is that no more albumen has appeared in the urine during the past three years, so that in this case we can conclude that we have again the proof of the cure of the kidney condition which produced the albuminous urine, and that after a rather severe trial.

"In this case I found oxalate of lime with uric acid."

"CASE III.—M., warehouse lad, 19 years old. A young man with red hair and pale eyes, nervous, lymphatic temperament. Does not complain about his health; in fact, answers in the negative to all the questions put to him as to possible functional derangements. He was brought by his father on account of the weakness of his health and his unsatisfactory general condition. The urine is rather pale in colour, acid, and, besides oxalate of lime, it contains a certain amount of albumen, which appears immediately after the addition of cold nitric acid. Examined morning and night on several different occasions during the following four months (the night urine is that which he passed before going to bed). The albumen was always found in the night urine when any was present, which was not always the case.

"Subsequently the albumen disappeared completely, and it has never reappeared, except during the administration of copaiba for a gonorrhœa two years ago, at which time, besides the copaiba found in the urine, there was undoubtedly also some true albumen.

"Since that time there has been no albumen when on different occasions I have examined his urine; and in January 1878, after having carefully examined it with a view to writing this paper, the urine was absolutely free from albumen."

"CASE IV.—M., aged 17, brother of the preceding case, was brought to me a week after him, the father complaining in the same manner with regard to his health. The physique of this son was quite different from that of his brother. He was tall and thin, with dark hair and complexion, sanguine and bilious temperament. As usual in these cases he said that he had nothing himself to complain about. His urine is often markedly albuminous each morning when he comes, but often there is no albumen in that which he passes before going to bed, or when he rises in the morning. He was so ill and delicate that I thought it necessary to send him to the sea-side for a few months. When he returned the presence of albumen in his urine was much more rare.

"Two years after, on examining thoroughly his water, for some time I could not find any albumen, and when, for the purpose of this paper, he came to see me, and sent me several specimens of urine, I found it always normal. He is now in good health.

"As his illness was more serious than those of the other cases, I used the help so kindly given by Dr Galabin, who took the sphygmographic tracing of the pulse of this young man. This tracing shows the characteristic of good health, without anything to suggest the suspicion of any renal disease. Dr Galabin says in his report, 'The tracing of M. is quite normal, the tension is rather low than high.'"

"CASE V.—A young man of 17 years, seen for the first time in 1874. He was beginning to learn his profession of civil engineer in the office of his father, and when he came to see me complained of weakness. His complexion was pale, hair light red, and blue eyes. He was very thin, and only weighed 133 pounds, though measuring 5 feet 8 inches in height.

"The point I had to settle was whether the weakness was due to his habit of riding a bicycle. He had no pain in the back or in any other part of the body. His appetite was very bad, and his tongue often unpleasantly dry during the night.

"The physical examination did not show any lesion until the urine was examined. This was found freely albuminous. Specific gravity was 1019. It was very acid, and on cooling showed an abundant deposit of oxalate of lime crystals. It was of a dark sherry colour. On examining very frequently the deposit, I found but rarely a cast, which would have been difficult to distinguish from a thread of mucus, but for its containing a little collection of epithelial cells. But I have met with this same kind of cast in normal urine when I have examined with equal perseverance, and I judge that from a practical point of view one could say that the urine was free from tube casts.

"After this the urine was examined daily for a fortnight, and was found albuminous ten out of the fourteen days. He was sent to the sea-side for two months. On his return another series of fourteen days showed that the urine was albuminous in five of them. Since then, during three years, I have examined his urine from time to time, and during the first two of them found albumen in several specimens. During the last year none has been found. In January 1878, with a view to this paper, I examined a certain number of specimens, but never found any albumen.

"He is now in good health, and follows his occupation.

"I will mention in passing that I have treated his brother for a sort of weakness in connexion with a condition of the urine, entirely different, but well defined. I mean a great excess of urea, giving a specific gravity varying from 1028 to 1033, and showing crystals of nitrate of urea on pouring nitric acid down the side of the test tube until it formed a layer at the bottom.

"I could continue to give other cases of this disease, but they so much resemble each other that it would be useless to give more of them in detail. I have chosen the preceding because they all ended in a complete cure, and it is specially with the view of proving the possibility of cure in cases of simple chronic albuminuria that I give these cases.

"I am now going to give two others to show the beginning of the disease."

"CASE VI.—M. X., at present at Oxford University, came to see me in Sept. 1877 complaining exactly of the same weakness that the preceding patient had complained of; and his urine gave exactly the same conditions. I have examined a large number of specimens and found it albuminous each day, and always in the evening. This has continued up to the moment of writing this paper.

"I have known this young man since he was 15 years old, and often had occasion to inquire into the state of his health, always examining his urine when he was brought to see me, and never found any albumen until September 1877. He has never had any sore throat or any acute illness during the summer and autumn of 1877; and I have no doubt that in a few months he will be cured from this condition of weakness."

"CASE VII.—Son of an eating-house keeper. It is said that his mother is dying from albuminuria. Brought by his father in Oct. 1877. The son not at all wishing to be considered ill. The usual complaint on the part of the parent that the child is languid, etc. The urine is considerably albuminous. It was impossible for me to continue the examination of this case, my request to have the urine sent being refused, but I mention it because eighteen months previously I had treated this boy for a subacute pleurisy of the left side which lasted several months. I examined frequently his urine while he was under this condition, but never found it albuminous."

"These cases are so frequent that I may mention that during the past fortnight three fresh examples have come before me. One in a schoolboy aged 15 years, another in a workman of 19 years, and another in a medical student of 20 years."—*Guy's Hospital Reports*, 1878.

It is a great pity that in this very interesting series of cases more attention was not given to the precise moment during which albumen was present or absent in the urine. But in all it would seem that albumen was not found in the "urina sanguinis," that is, in that excreted during the night; but was in the "urina cibi," that is, in the urine excreted during the day.

If this connexion between the presence of albumen and the repasts was not taken into consideration, it is doubtless because Dr Moxon had not regarded it as an important factor, or because his mind had been directed towards another explanation. Because though he says, "I have no intention of giving a theoretical explanation of these cases," he adds that perhaps the theory of Sir William Gull may be true, viz., that the albuminuria is due to an "atony of the vessels and nerves," but that he is rather inclined to think himself that it is caused by an irritation of the kidneys by morbid matters contained in the urine, such as the oxalates. He thinks also that there may be a connexion between the appearance of albumen in the urine and "the epoque at which the sexual functions complete their development, when their tendencies are not completely under normal control."

In one of these cases, at least (Case III.), there was no connexion between the vertical position and the albuminuria, for there was no albumen passed either on rising or immediately before going to bed. So that the explanation given by one medical man, who had a somewhat similar case, that it was due to the increase in the weight of the blood column in the vertical position cannot be admitted.

In some notes on the "Diagnostic Value of Albuminuria," made amongst the outdoor male patients of the Birmingham General Hospital, D. R. Saundby found in 145 male patients taken *seriatim*, as they presented themselves before him, that no fewer than 105 contained albumen in more or less quantity, demonstrated by boiling and the addition of acetic acid. This makes a percentage of 72·4 with albumen. There were 26 patients, ageing from 10 years to 20, of whom 9 were suffering from "debility," and 5 from "dyspepsia." There were 26 patients, ageing from 20 years to 30, of whom 3 were suffering from "debility," and 11 from "dyspepsia," making a total of 28 under 30 years of age who were suffering from "debility and dyspepsia," and he classed under this heading those "in whom no definite pathological changes could be discovered." Of these 28 cases, 16, or more than half, had albumen in their urine. In the other cases, varying from 30 up to 80 years, only 1 man, who had no definite pathological changes, was found to have albuminous urine. In speaking of some of these patients, though not mentioning how many, or at what particular time of day the examination was made, Dr Saundby says, "I have tested their urines on each appearance of the patients, and have proved its persistence for weeks and months. The microscopical examination has revealed usually nothing. In one or two cases there were a few oxalates, and in one or two a few hyaline casts, but the latter especially were quite exceptional, and, as we know, were of no pathological significance. As the urine examined was always the after-breakfast urine passed in my presence, I thought it desirable to investigate the conditions more closely." "I admitted two youths, aged respectively 15 and 17, and had them under observation for some weeks. The urine was examined as passed after breakfast, after dinner, and after tea, and during the night, and under varying conditions of diet; absolute milk diet, and complete rest in bed being enforced for some days. The result was to prove that the albuminuria did not depend solely upon diet or exercise, for though complete rest and milk diet diminished the quantity, they did not cause it to disappear; and on leaving the hospital the state of the urine was just the same as on admission. As I have had it suggested to me by more than one friend that spermatorrhœa might account for this symptom, I must be allowed to point out that the seminal and prostatic fluids do not contain any albuminous body coagulable by heat" (Simon).

The following cases, coming under my own notice, first drew my attention to the existence of this "intermittent albuminuria," and led me to hunt up other cases in the different medical journals; and all which I have been able to find are given in full in this paper. The first case I met with, and to which my attention was drawn by a brother practitioner, I thought was a unique and undescribed condition, it not appearing in the ordinary text-books; and one or two distinguished consultants who saw the case in consultation seemed to think so too. However, for the sake of the patient, I was glad to find that it was a known and comparatively harmless condition, though but few had sent notes of such to the journals. Doubtless it is much more common than is generally supposed, and is not found oftener simply because it is not looked for,—the careful comparative examination of the urine having only recently detected a case which, under ordinary circumstances, would have passed unnoticed.

CASE I.—E. H., aged 17; student; first seen four years ago, in 1878; was noticed by his parents to be dull, listless, and not to have the same amount of buoyant energy which had previously characterized him. His mother, who was a very observant woman, had frequently noticed that his urine in the chamber was very frothy, and continued so for some hours after micturition. She thereupon sent her son with some of his urine for examination. The following was his condition on first presenting himself:—He was a youth of about 5 feet 9 niches, fair complexion, and nervous temperament. He appeared pale and anæmic, though the muscles were well nourished; and he had not, so far as he knew, lost much weight. He complained himself of nothing, and even on questioning declared that there was nothing at all wrong with him, and that his mother's fears on his behalf were quite groundless. He had no headache; no pain or uneasiness after food; was enabled to pursue his course as a student without any interruptions; and could take part in the usual exercises and sports, though he admitted that he had lost his usual zest for them, and preferred remaining quietly by himself to mixing with his companions. There was no history of any previous attack of scarlet fever or diphtheria, etc. On physical examination all the various systems were normal, including the circulatory. There was no hypertrophy of the heart or increased vascular tension. The specimen of urine he brought with him for examination contained no albumen, and was apparently normal in all respects save the presence of an unusual amount of oxalate of lime crystals. Sp. gr. was 1018; reaction acid.

His visit took place in the morning, shortly after his breakfast; and on his being requested to pass water, it was found to contain at least a sixth of albumen. As this was the first case which came under my notice of this form of albuminuria, such a result greatly astonished and at the same time alarmed me. On carefully examining this sample of urine in other respects, it was found free from tube-casts, but loaded with oxalates, which were deposited on cooling on the top of a considerable amount of mucus. Frequently repeated examinations of the urine at various times of the day proved the almost constant presence of albumen after food had been taken. I say almost, because on some occasions, especially in the after part of the day, there was sometimes none to be discovered. There was never any albumen in the urine passed on rising in the morning, or in that passed immediately before going to bed, if a sufficient time had been allowed for the completion of the digestive process. Neither was it present at other times of the day if a considerable time had elapsed between the extrusion of the urine and the ingestion of food. At no time was there a tube-cast to be found, and always there were more or less oxalates.

Other influences than digestion—such, for example, as exercise—seemed to have no influence on the condition of the urine.

This patient remained under treatment and personal observation in Edinburgh for about six months. The treatment consisted in a strictly milk and white-meat diet, and the exhibition of small doses of arsenic. Under this treatment he steadily improved, and the amount of albumen diminished in quantity, but did not disappear entirely, at all times being most abundant after the morning meal. It was not considered necessary to stop his usual work. At the end of the six months he had recovered much of his former health; but affairs then remaining rather stationary, he was recommended to leave Edinburgh. A suitable opening occurring in an architect's office in London, he went there. He still continued the arsenic, but returned to his ordinary diet. The change of air produced a rapid change for the better in every way, and at the end of a few months all traces of albumen had disappeared, and his usual health was completely restored.

The subsequent progress of this patient was quite satisfactory, a slight trace of albumen appearing only once again during the course of an attack of acute eczema; and then it was in so small a quantity that it was only doubtfully present, and it would not have been detected at all by a casual examination.

CASE II.—M., medical man. Up to the age of 23 had enjoyed universally good health, but at that time his friends noticed that he had been gradually becoming changed both in appearance and character. Apart from one or two symptoms which he had noticed himself, but to which no importance was attached, he had made no complaint; and but for the fact of his urine being accidentally examined one morning after breakfast, all would have passed with the remark, that "I don't know what is the matter with him, but he seems a good deal out of sorts lately." However, the result of the testing of the urine was the appearance, greatly to the alarm of the patient and his friends, of a considerable cloud of albumen. On testing his urine myself shortly after the previous examination, I was greatly surprised not to be able to detect a trace. Another examination produced negative results; but the urine passed the same day after the next meal again showed a considerable deposit, though not such an extensive one as the after-breakfast urine contained. This curious state of affairs—as I then considered it—led to a careful observation of the case and testing of the urine at different times, with the result as follows:—Urine passed on first rising in the morning did not contain a trace of any coagulable element; that passed a short time after breakfast contained a considerable amount,—sometimes so much as one-sixth, measured roughly, by allowing it to deposit after the addition of nitric acid and boiling, and then noticing the depth of the precipitate as compared with the amount of urine contained in the tube. Urine passed again shortly after the previous micturition contained some albumen, but less than that first examined; and that passed after a considerable lapse of time, or just before the next meal, contained none,—only, however, for the albumen to again appear after the meal, whatever it might be, and however often repeated. The deposit after the other meals always remaining less than the after-breakfast one, if the ordinary everyday food were taken, though, of course, the dinner would contain more nitrogenous substances than the breakfast. But this relation in the amount of deposit could be altered if the diet were especially regulated, and only milk and bread taken at breakfast. The urine passed immediately before going to bed did not contain any, if a sufficient amount of time had been allowed to elapse between taking dinner and that act. Other circumstances did not seem to materially affect the presence or absence of albumen in the urine. Muscular exercise—such, for example, as long walks—if no food were taken during the time, did not produce any deposit of albumen, but did often that of phosphates. The colour was usually pale straw; reaction acid; specific gravity varied, but was usually about 1020. On placing the urine in a conical glass and allowing it to stand, a plentiful precipitate of mucus appeared, surmounted by a silvery line of considerable thickness, like that usually produced by oxalate of lime crystals.

Microscopic examination showed the constant and plentiful presence of oxalate of lime crystals, sometimes well formed, but usually not so. No tube-casts, though carefully looked for at various times and by different observers, could be ever discovered. The amount of urine was normal. There was occasional pain in the loins of a rheumatic character, sometimes fairly severe; but the patient had twice suffered from genuine lumbago, and was of a rheumatic temperament; and for the rest, there was no relation, as carefully observed on several occasions, between the presence of the pain and the presence or the amount of the albumen deposited.

The alimentary system, in so far as any marked subjective or objective symptoms were concerned, was normal. Appetite perhaps diminished, but the digestion apparently good and bowels regular. Circulatory system normal.

Percussion and auscultation revealed nothing unusual; no hypertrophy of the heart; nothing valvular. Pulse regular; normal rate; and the tension not at all increased,—if anything, diminished; no discoverable venous engorgement. Nervous system, with the exception of a curious monocular blindness, normal. This blindness came on in attacks at first with an interval of some months; but gradually increasing in frequence, he could not say how many he had had, but thought it might be between one and two dozen. There was no aura of any kind to announce their onset,—no headache, no pain, or unusual sensation, and they did not seem to be determined by any unusual position or occupation. Once it seemed to have been produced by a violent thunderstorm and vivid lightning, and was on that occasion of unusual length. It was always the right eye that was affected. The attack came on quite suddenly. Gradually the blindness increased in intensity until it was complete, and not even the position of a window or lamp could be determined unless the latter were held at the side of the head, when a faint light could be discovered. The blindness gradually passed off, leaving a violet or purple halo around everything. These attacks were unaccompanied by pain or any unusual sensation in the affected eye, and left no after result, no headache or dimness of vision. Their duration varied, but usually was not more than a few moments from the commencement to the perfect restoration of sight. During the attack no alteration could be seen in the two pupils, and ophthalmoscopic examination, as practised two or three times, at different intervals, could detect nothing except, *perhaps*, a little congestion of the retinal veins. The left eye was never affected. The patient had never suffered from migraine or headaches.

Vaso-motor Functions.—The patient was of a somewhat anæmic appearance, but there was no œdema of any part at any time. No dryness of the skin, but rather the reverse, perspirations being very easily induced.

On questioning it was found that in addition to the occasional loss of sight in one eye, there had been, for some time past, a general falling off in health, though very gradually,—so much so, that its commencement could not be fixed. At the date of examination it consisted in a feeling of lassitude and inability to work for any length of time, either at reading or seeing patients, without feeling very tired. The attention could not be maintained, and the memory was not so good as formerly. The character had become changed, and from being cheerful and contented he had become moody, irritable, and unwilling to bestir himself. He avoided, as far as possible, meeting people, and even did not care to talk or associate much with his own immediate friends. He always complained of feeling tired, and though the nights were good, was always inclined to lie down and sleep, even immediately on rising in the morning, but with all this sleep never felt refreshed.

The treatment in this case, as soon as the condition was discovered, was an entire cessation from all work, and a diet of white meat and milk, with a certain amount of benefit as far as the amount of albumen in the urine was concerned; but the general health not improving rapidly, a further change in the shape of a voyage was recommended, and this was followed out with marked benefit. Two voyages to Australia—although, of course, the milk diet could not be followed out—reduced the amount of albumen to a mere trace, or even none, after breakfast, the period where formerly most had been present. This result was produced after twelve months at sea, and the general health was now completely restored, all the old symptoms of lassitude, fatigue, and moodiness having disappeared. The inclination and power for work had returned, as well as the former appearance of health. The medicines taken were limited to citrate of iron and quinine; the syrup of the phosphates of iron, strychnine, and quinine; and arsenic.

Twelve months after the return from sea, and when the former patient was in full work, a careful examination of the urine at different periods, and at *all* times of the day, could detect no trace of albumen or of any other abnormal element in the urine.

CASE III. differs slightly from the other two in that it occurs in an elderly gentleman; and this is the more striking, inasmuch as all the other recorded cases are those of young people.

Mr J. B. F., aged 69, clergyman. First came under notice in September 1882, complaining that he was a little out of sorts, and that for the last few years his health had not been quite so good as formerly; but that this was specially noticeable during the past few months. Formerly he had been a very active man, a great walker and fisher; but now he always felt disinclined for any exertion, though when once he has started on a walk he gets over the first feeling of fatigue, and can then walk as far as ever he could without trouble.

His present appearance is that of an apparently healthy, hearty-looking man; a somewhat pallid complexion.

Alimentary System.—Appetite good; tongue a little furred; bowels somewhat constipated; otherwise normal.

Circulatory System.—Pulse intermits; tension not increased. There is a slight systolic murmur in the mitral area. Palpitation occasionally exists. There is no hypertrophy.

Respiratory System is normal.

Urinary System.—No pain in the region of the kidneys; no vesical symptoms. On examining his urine at his visit after breakfast there was found a considerable amount of albumen. On depositing, the microscope showed the existence of abundant oxalate of lime crystals, which for the rest were visible to the naked eye as a distinct silvery line on a mucous cloud. No tube-casts could be discovered at any time, but sometimes uric acid was present. The patient was requested to send next day specimens of his water passed at different periods of the day, viz., on first rising from bed, after breakfast, before dinner, and after dinner. The before-breakfast urine remained clear on boiling and adding nitric acid. Similar treatment of the after-breakfast water produced a heavy opacity. Before dinner the urine was free from albumen; after dinner some was present, though to a less degree than after breakfast. The microscope revealed nothing fresh. Subsequent examinations produced the same results as to the time of the presence of albumen, though the amount was very variable.

Cold nitric acid produced sometimes a slight opalescence, which boiling caused to disappear, and which could not be obtained by boiling and the subsequent addition of nitric acid.

I should have mentioned before that his sleep at nights was good, and he had not that strong tendency to sleep during the day so often observed in these cases.

The treatment consisted in a diet of milk and white meat, fish, etc.; the avoidance of much wine and of sweets; steady daily exercise in the fresh air; and, finally, the steady administration of small doses of arsenic.

Under this his general health had greatly improved at the end of a month, but the condition of the urine remained much the same, less albumen being present, though, in the urine passed in the after part of the day. The end of this case I am unable to give, but the peculiar urinary symptoms render it worthy of record clinically; and I am of hopes that a continuance of the treatment will produce in this case also, as in the others, a permanent cure.

Symptoms of Post-Cibal Albuminuria.—The noticeable features in this class of cases, and those upon which a diagnosis must be formed as well as a treatment, are in part negative and in part positive, the former being at the least as important as the latter, as without them a differential diagnosis between this form of albuminuria and Bright's disease would be very difficult, and as a consequence the prognosis very different, and the distress and grief to the patients and their friends, as well as the anxiety of the medical man, unnecessarily great. Every one, both medical and non-medical, has been accustomed to consider that amongst the first signals of disease of the kidney must be placed albuminuria; and, consequently, if any of this principle appears in the urine apart from an acute febrile or cardiac attack, pulmonary disease, or some local interference with the renal circulation, immediately the conclusion is jumped at, here is a case of Bright's disease, and a correspondingly dismal view of the case is taken. But a careful consideration of the cases here given, and their ultimate results, no longer justifies such an opinion; and though the proportion of albuminurias which one will be able to class with them will always be small compared with those which must go with Bright's disease, still it is encouraging that some at least can be so classed, and the symptoms which will guide us in our opinion of them are the following:—

Usually the patient does not come to the medical adviser with any definite complaint, or, indeed, with any complaint at all; perhaps he may admit that he does not feel very well on being questioned upon the point, but attaches no importance to that fact, and admits it reluctantly. But, as a rule, the non-complaining patient is brought by his friends, who have been aware that for some time it has not been all right with him, and the condition continuing, they at last resort to medical advice. On a careful examination, partly of the patient, partly of his friends, the following facts are elicited:—That for some time past, perhaps for months, in some cases even longer, the patient has not been himself; his character, which formerly was quite satisfactory, has entirely changed; he has become moody, irascible, easily irritated by very trivial occurrences. Things which formerly would have had only a slight or passing effect now serve to depress him profoundly. Formerly, perhaps, of a cheerful and sociable nature, he is now the reverse, and flies all society, preferring to be alone, even to associating with his own near relations or his most intimate friends. He becomes apathetic, and ceases to take any interest either in his own daily life and occupations or in that of those who surround him. He is almost always tired, even after a long and good night's rest, and is always ready to throw himself down on the sofa or bed even immediately after arising in the morning, and soon falls asleep, but only to awake up equally unrefreshed. The appetite is not so good as formerly. The memory also has failed; and besides inability to fix the attention upon literary work of any sort, there is not the same power of grasping a subject as there used to be; and yet with all this the patient does not seem to imagine that there is anything out of the way with him, and only asks to be let alone. This is an outline of a well-marked case, but the lesser marked ones agree with it in the main parts. The appearance is frequently haggard and drawn, the complexion pale and anæmic. No great loss of flesh as a rule, or anything marked in the outward look which would lead one to imagine any particular system affected. On close examination there is no marked change in any of the vital organs; lungs and heart and nervous systems all normal, as also apparently the digestive, and one would be puzzled to assign any cause for the above symptoms unless the urinary secretion were examined; and even then, unless it were examined at a particular time of the day. In fact, the symptoms as a whole resemble those of oxaluria, as indeed would be expected, as more or less oxalates are invariably present. There is no œdema of the face or other parts; no hypertrophy of the heart or increased tension of the pulse; no undue dryness of the skin; no marked tenderness of the lumbar region, and if anywhere present, would be accounted for by the oxaluria, that being a sign of that complaint, as pointed out by Dr Begbie (*Edinburgh Monthly Journal of Med. Science*, 1849). There is nothing in the patient's aspect or history to draw attention to the urinary system, and the complaint would pass unnoticed by those medical men who are not in the habit of constantly examining every patient's urine, and doing so with specimens passed at different hours of the day. On doing this, however, the intermittent presence of albumen is made out. It is always present in well-marked cases after food, its quantity varying with the amount and quality of the aliments taken. On allowing the urine to stand and cool, a cloud of mucus is usually deposited, on the top of which the naked eye can frequently make out a thick silvery line, showing the existence of oxalate of lime crystals; but if the unaided eye fails, the microscope can always detect the presence of this salt. Frequently the field of the microscope is full of these envelope-shaped crystals, some of them being large and well-formed, whilst frequently these are replaced by a large number of smaller ill-defined ones. No tube-casts of any kind can be found in any quantity; but occasionally, after careful searching, one or two hyaline cylinders can be discovered, looking rather like threads of mucus. The reaction is acid, sometimes very much so, and the specific gravity normal. An important negative point, besides the absence of epithelial casts, is the absence of albumen in the water first passed in the morning on rising from bed, and also that passed at any considerable lapse of time after meals if the bladder has been previously emptied of the urine of digestion.

An important feature in these cases, but one to which no reference has been made in the majority of those published, is the condition of the cutaneous functions. In two cases which came under my observation, transpiration, far from being diminished, as is the case in true Bright's disease, was increased—in fact, in one of them so much so as to be a cause of more or less discomfort to the patient, the slightest unusual exertion in the way of running, walking fast, or, in fact, any outdoor exercise, being ample to throw him into a profuse and general perspiration. And not only so, any unusual excitement, anything which produces that sensation commonly known as nervousness, was quite sufficient to cause, to him at least, a sensible diaphoresis. The importance which I am tempted to give to this negative symptom, the absence of abnormal dryness of the skin, is justified by the prominence given to its presence by almost all writers on Bright's disease. For example, Dr Osborne of Dublin, writing in 1834, names his work *On the Nature and Treatment of Dropsies Accompanied by Coagulable Urine and Suppressed Perspiration.* Semmola, speaking of the defective formation of urea, says, "It is caused by the total or partial absence of the cutaneous functions. In consequence of this suppression of the respiratory functions of the skin, two chemical disturbances arise which are closely united from a biological point of view, viz., the alteration and unassimilability of the albumenoid substances, and defective combustion, that is, a decrease in the formation of urea." He does not attempt to explain this fact, while calling attention to its existence in the strongest manner, but says, "I leave it to experimental physiology to elucidate the part which the cutaneous functions play in the assimilation and combustion of albumenoid matter."

M. Jaccoud, in his *Traité de Pathologie Interne,* sixième édition, says, "L'intégrité de l'état moléculaire et de la diffusion de l'albumine est subordonné à l'integrité des fonctions de la peau;" and when speaking of the effect of treatment, says, "le rétablissement de la diaphorèse naturelle ou artificielle est un signe des plus favorables."

Whether all the cases quoted in this paper from different sources can be classed under the heading of post-cibal albuminuria without bringing in another factor than the ingestion of food is, from the insufficiency of the observations, doubtful. But that the majority bears a close relation, and in my cases, where investigations were made with that view, an exclusive relation to digestion is quite clear. So that the explanation given in some of the cases of an "atony of vessels and nerves;" or another view, that it may be produced by the presence of morbid matters in the urine, such as oxalate of lime causing an active irritation of the kidney; or that it is in some way due to a disturbance of the sexual system reflecting a disturbance to the urinary system; or that the albumen is due to the presence of semen, or to differences in the renal circulation produced by the horizontal or vertical position of the body. All these explanations must be deemed insufficient to explain at least the majority of these cases.

(*To be continued.*)

Part Second.

REVIEWS.

Diseases of the Heart and Thoracic Aorta. By BYROM BRAMWELL, M.D., F.R.C.P.E., Lecturer on the Principles and Practice of Medicine, and on Practical Medicine and Medical Diagnosis, in the Extra-Academical School of Medicine, Edinburgh; Pathologist to the Edinburgh Royal Infirmary; Additional Examiner in Clinical Medicine in the University of Edinburgh. Edinburgh: Young J. Pentland: 1884.

THIS beautiful book is, with the sole exception of Hayden's valuable treatise, the most bulky volume on diseases of the heart in our language, which fact is our reason for not having noticed it sooner. With certain portions of the work we are already acquainted, as they have previously appeared in the pages of one or other of the medical journals; but the remainder is large enough to occupy the reader for a considerable period. The receptive powers of the student must have considerably increased within recent years, for the author states in his preface that the subject-matter of the work was delivered to his class "almost exactly as it stands" during the last session. Now, so far as our memory can be trusted, no course of lecturés on practice of physic in our student days contained such a detailed account of the diseases of the heart as is presented in the volume before us.

As an example of the art of publishing, this book is beyond all praise. The volume is a goodly one, printed on excellent paper, in clear type, and abounding in capital illustrations. Amongst the woodcuts there are several faithful representations of various objects, many suggestive diagrams, and numerous copies of tracings taken by one or other of the modern scientific instruments. But the lithographic plates, comprising pictures of morbid specimens and drawings of microscopic sections, form perhaps the most notable feature of the book. They are without exception beautifully executed, and almost all of them are as clear and graphic as could be desired.

The text contains very few misprints, nevertheless there are a few blunders which have been overlooked in revision; such are, for instance, the division of *asynchronic* into two words on page 156, while the Professor of Materia Medica in the Jefferson College is in the habit of assuming an "*s*" at the end of his Christian name, which is omitted on page 338. A graver mistake is to be found in the heading of Table IX., page 559, which in its present form is somewhat difficult to understand; but the most astounding freak is to be found at page 646, for by a singular transposition it appears to have neither beginning nor ending, and exhibits a curious example of what the geologists would call "unconformability" on either hand.

While dealing with externals, it may be well to say a word or two about the style of the work. Its language is plain and unaffected, erring perhaps by inclining too much to the side of simplicity. There are, however, a few phrases to which we must take exception, as tending to undermine the purity of our language, of which we may cite as an example the combination *all-round*, found, for instance, in the following words, quoted from page 56, "a broad and comprehensive all-round view of the case." There are several terms akin to this which are found scattered throughout the work and mar its style, in addition to which we may draw attention to the frequent occurrence of "*i.e.*," and the constant and unusual method of employing *vice versa*, as disfiguring the pages of the work. But it may be possible, perhaps, to be too great a stickler for the "Queen's English;" and we would not be captious in our criticism of one who always speaks most generously of those to whom he refers.

It is quite impossible, within the limits of a single review, to devote as much attention to the contents of the work as we should like; we shall, however, briefly refer to the salient points in regular order.

The first chapter is devoted to a very elaborate account of the anatomy and physiology of the heart, in which the muscular structure, the nervous supply, and the connexions of the heart with the minute bloodvessels are described more fully than in any other work on diseases of the heart. The ephemeral character of many modern physiological facts is widely recognised, and we learn to be careful in adopting the teaching of the laboratory as a basis for pathological theories; yet we think that the teaching gathered and presented in this first chapter is pretty well established, and we are inclined to agree with the author that "it is only by attention to these minute physiological details that the physician can hope to make much advance in cardiac pathology."

The next chapter deals with the general pathology of the heart, and we are glad to observe in it that the author urges the reader to have regard to the condition of the system as a whole, and not to confine his attention entirely to the disabled heart.

The third chapter, which is of considerable length, contains a very full description of the methods of clinical investigation in cardiac diseases. There is a scheme for recording cases, a summary of the chief symptoms, including a very full discussion of the theories which have been advanced as to the cause of Cheyne-Stokes' respiration, and an account of the physical signs met with in examining the heart and great vessels, to which is added a description of the sphygmograph and its uses. In this chapter there are one or two omissions that strike the reader as unexpected in so large a work; for instance, to take up only one point, we find in the section devoted to the inspection of the veins no reference to the jugular phenomena indicative of the most interesting condition, usually associated with the names of Leyden and Roy, in wh ichthe right ventricle has been commonly believed to act twice for each contraction of the left ventricle; and there is, again, no remark about the venous valve murmur. Moreover, in speaking of the causation of the endocardial and vascular murmurs, we are somewhat surprised to find nothing about the more recent work of Heinsius and Barié on this subject. In the main, however, this chapter is well written. It contains a careful analysis of the different views regarding doubling of the heart sounds, and a judicial review of the recent controversy carried on in our pages respecting the basic murmurs of anæmia. In this chapter also we must not omit to mention that Dr Bramwell's diagrammatic representations of cardiac murmurs seem to us to be eminently useful and instructive.

The three succeeding chapters, which are devoted respectively to the diseases of the pericardium, endocardium, and myocardium, are in our opinion the best in the book. The author believes in the existence of primary pericarditis apart from wounds and rheumatism, and narrates a case in which there appeared to be no rheumatic complication. It has long been a vexed question, whether such cases, which are to be found recorded now and then in the medical journals, are to be regarded as non-rheumatic. We confess ourselves to be somewhat suspicious in this matter, as we have watched cases closely resembling that given in this work, caused by exposure and apparently idiopathic, but which were followed in a few days by an attack of acute rheumatism. Dr Bramwell is right to record this case, and we hope all similar ones will be published. When speaking of pneumopericardium, it might be well to point out to students that *paracentesis thoracis* has been known to cause this condition. Not many years ago a fatal instance of this kind occurred from the operator when aspirating the pleural cavity going a little too far, and by some singular manipulation allowing air to enter the pericardial sac.

We are not so confident as Dr Bramwell with regard to the diagnosis of fatty degeneration of the heart; but we are glad to be at one with him as to the influence of salicin and its compounds on rheumatic complications. The sections dealing with hypertrophy and atrophy of the heart and its chambers are excellent; and the author shows himself in his remarks on the connexion between Bright's disease and hypertrophy of the left ventricle to be thoroughly versed in the most recent work on the subject.

The two last chapters of the work, which treat of the cardiac neuroses and of diseases of the thoracic aorta, are well written, and present a clear and pretty complete statement of the maladies to which they are devoted; and the volume closes with an appendix on the examination of the heart by means of the cardiograph, giving descriptions of the instruments used for clinical purposes, with the methods employed and the results obtained.

This work, it must be borne in mind, has been primarily intended for the student, and this fact has made it necessary to dwell largely on certain points which might have been touched on more briefly, while other matters, of greater interest to the physician, have had to be curtailed. In spite of such shortcomings, however, this newest treatise gives a good picture of the modern teaching on the subjects with which it deals, and we wish it the success which its merits deserve.

A Practical Introduction to Medical Electricity. By A. DE WATTEVILLE, M.A., M.D., &c. Second Edition. London: H. K. Lewis: 1884. Pp. 208.

THIS little book of De Watteville's contains everything that it is needful for a practitioner to know concerning a subject of daily increasing importance. And if a medical man desires to do any good to his patient, or to get any benefit to himself, in the way of completing his diagnosis, there are a few little matters which it is imperatively necessary for him to know. What would be thought of a physician who prescribed *quantum sufficit* of any medicine, trusting to the patient to find out by experience the proper dose. But to use electricity without a galvanometer to measure the current strength is even more irrational. It is to trust to feelings utterly ignorant of what they ought to perceive for information which they are incapable of giving. Besides, we all remember the misleading character of Sir Humphrey Davy's experience. He wished to try the effect of oxygen inhalations on a paralytic; but first he put a thermometer in his mouth to test his temperature. In a short time the patient said, "I feel better." Sir Humphrey felt surprised, but said nothing, and cured his patient by a daily application of the thermometer, without any oxygen at all. How many patients treated electrically—with the continuous current at least—have been cured without any electricity, or with only very varying, uncertain, and incapable quantities. The distrust with which electric treatment is so apt to be regarded is undoubtedly due to the ordinary method of employing it, without any but the barest idea that some sort of current is passing, without a notion of its strength, or even the vaguest conception of its direction. No wonder that electric treatment is often looked upon as but a form of quackery. It behoves those who thus stigmatize it to try it fairly first, and there is no better guide for them to follow than De Watteville's little book. First, we have a chapter on Electrophysics, giving in short compass a *résumé* of all that is known as to current electricity; how it is or may be produced; how its force and strength are to be measured, and the resistances it meets with in its circuit are to be ascertained, as well as how it is to be "collected" and applied. The next chapter is upon Electro-physiology, and contains an account of the effects of galvanic and faradic currents on the motor and sensory nerves, on the muscles, and on the body generally. Then follows a chapter on Electro-diagnosis and prognosis in nerve and muscle lesions, in which the whole subject is carefully gone into and explained, the importance and the use of the galvanometer illustrated, probable fallacies indicated, and the method of avoiding them explained. The last chapter is on Electro-therapeutics generally, and contains full explanation of the diverse influence of each pole, advice as to the kind of current to be selected, its posology, etc., concluding with a summary of special Electro-therapeutics, in which all the various diseases in which current electricity has been employed are enumerated, with a short notice of how it ought to be used, and the probable value of the results obtained. It seems a most remarkable fact that an agent so potent as electricity, and one daily becoming so indispensable to civilized man in his every-day occupations, should be so limited and restricted in regard to the therapeutic uses to which it is applied. One great obstacle to the extension of its employment has undoubtedly been the fact that, as a rule, electric batteries for medical use have only been obtainable from the surgical instrument maker, from whom nothing could ever be procured but the adopted battery of his predilection, whatever might be its shortcomings. Happily there are now at least two men, Mr Schoth and Mr Thistleton, both in London, who devote themselves solely to the manufacture of medico-electrical apparatus, and from whom any special instrument and every information may be obtained. Another reason why electric treatment has not made the progress that it ought to have done is the absence of proper teaching, especially of practical teaching, in our schools. In Edinburgh, we are sorry to say that there is not even an electrical department in connexion with the Royal Infirmary. Batteries of various kinds are certainly in use within its walls, but they are more often perhaps out of order than the reverse, and in the hands of students and nurses they are worse than useless, as far as scientific treatment is concerned. It is a disgrace to so large and important a medical school as that of Edinburgh to be without an electrical department in its magnificent hospital, and we are glad to hear that there is a prospect of this want being speedily supplied.

In this book De Watteville has omitted entirely the subject of Franklinic or frictional electricity; it is true that electricity in this form is possessed of but trifling chemical activity, but it is in a high state of tension, and in that way it must have some mechanical advantages. As an electric bath, static electricity can be made to permeate the whole of the tissues, and it must exert a very powerful influence in the central organs of the nervous system, where trifling mechanical alterations may be fraught with most momentous consequences. According to Faraday, the action of one grain of water on four grains of sulphate of zinc liberates as much electricity as would constitute a magnificent thunderstorm. Yet such is the remarkable difference in the action of electricity in its different states of tension, that while one flash of lightning might, and most probably would, kill a man, the whole of the electricity of the storm might in the current form be passed through his body almost without attracting his attention. Static electricity is unquestionably possessed of great though somewhat unmanageable power. It therefore deserves that inquiry should be made into its mode of action and best method of application. Besides, this form of electricity as supplied by dynamo-machines is a matter of everyday use for various purposes. Accumulators capable of giving off electricity for some hours continuously are now supplied so cheaply in every large town, that an inquiry into the medical uses of this cheap and portable form of electricity cannot be long postponed.

The Treatment of Backward Displacement of the Uterus and of Prolapsus Uteri by the New Method of shortening the Round Ligaments. By W. Alexander. London: J. & A. Churchill: 1884.

In this small book Dr Alexander has collected the fugitive papers which have from time to time appeared in the various medical journals from his pen on the above subject. It appears that he first operated in December 1881, two months before Dr Adams of Glasgow, who had been investigating the feasibility of the operation on the cadaver, had an opportunity of undertaking it on the living; and at the end of his book Dr Alexander pays a very graceful tribute to Dr Adams' work on the subject. Dr Alexander has operated on 22 cases, all of which he briefly details; and he also refers to 27 cases operated on by others. The operation is fully described and characterized as "simple," though it hardly appears to be quite so, as in some of the cases it was only found possible to seize and shorten one ligament. The results are on the whole satisfactory, considering the intractable class of cases dealt with, and the operation certainly deserves a full trial at the hands of those who trace so much mischief to uterine displacements.

A Handbook of Diseases of the Eye and their Treatment. By Henry R. Swanzy. London: H. K. Lewis: 1884.

This is an excellent text-book, written by a surgeon of large experience and a thorough knowledge of the literature of his subject. Personally, we should have liked to have seen the author's views on many subjects more dogmatically asserted; but there can be no doubt that this would have diminished the value of his work as a pure text-book, in which respect it has greatly gained by the excellent judgment displayed in the arrangement and selection of, as well as by the relative importance attached to, the different theoretical and practical points discussed. We have now a considerable number of text-books on the eye, but know of none which we should deem likely to be of more use to students in all the practical branches of ophthalmic medicine and surgery. We would especially draw attention to Chapters VI. and XXI. on the lids and ocular muscles, which are, we think, the best to be found on these subjects in English text-books. Chapter XIV., too, on the motions of the pupil in health and disease, will well repay perusal; it is a subject, besides, not so fully treated in other text-books. The first chapters are on the optical portion of the subject, and here, it must be confessed, the author has been less successful. There is a want of accuracy on several points; and some of the diagrams are, we think, more likely to perplex than assist the student. The other illustrations, with which the book is copiously supplied, leave little or nothing to be desired.

Diseases and Injuries of the Eye: their Medical and Surgical Treatment. By GEORGE LAWSON. Fifth Edition. London: Henry Renshaw: 1884.

THE appearance of a fifth edition of this book, notwithstanding the number which have been written since it was first published, is sufficient proof of its usefulness to medical students and practitioners. In this edition some new matter has been introduced to bring it up to date, but it still retains the eminently practical character which has made it so justly appreciated.

The Modern Operations for Cataract. London: Macmillan & Co.: 1884.

THIS is a reprint of the *Lettsomian Lectures* for 1884, and gives, in the author's well-known lucidity of style, a good description of the main features of the operation now most generally performed for the extraction of cataract. Many useful and practical suggestions are also given as to when the operation should be undertaken, and in what manner this after treatment should be conducted. An historical sketch, bringing out the reasons which have led to the general adoption of the modern method of extraction, is interesting and instructive, coming as it does from the pen of one whose experience has extended through the period during which the development of these changes proceeded.

Syphilis and Pseudo-Syphilis. By ALFRED COOPER, F.R.C.S. Eng. London: J. & A. Churchill: 1884.

THIS is a readable book and not too long. It begins with an historical sketch of syphilis. The author does not believe that the disease was brought over from America at the end of the fifteenth century. He accounts for its epidemic virulence at that time by the prevalence in Europe of dissipation, dirt, and disease generally amongst the inhabitants. In this opinion we agree, for at the time each nation blamed the other for originating and spreading syphilis, and there was complete ignorance regarding its true natural history.

The following are the author's views with regard to syphilis and its relation to the soft venereal ulcer:—1. The disease known as syphilis is due to the action of a specific virus, a pathological agent, separate and distinct from every other animal poison, and never originating *de novo.*

2. The soft venereal ulcer (pseudo-syphilis) is due to the action of irritating secretions which, so far from being identical with the poison of syphilis, are altogether different and distinct from it. Such an ulcer may and frequently does arise *de novo* from inoculation of the products of inflammation, and may then be transmitted from one individual to another.

3. The virus of syphilis may be commingled with the secretions of a pseudo-syphilitic sore, or with secretions which by themselves would cause such a sore. In either case the resulting ulceration would possess double properties, evidences of which would sooner or later be exhibited. This is the author's creed, and on the whole we approve of it. He is, however, too dogmatic in his theory of the etiology of the soft sore. We are still in ignorance as to its true cause. Whether with Boeck we believe it proceeds from an actively inflamed hard chancre, or, with Hutchinson, that the products of syphilitic inflammation, in which the germ is not (a most intangible essence), is the father of it, or with the author, and a large number, who believe in the *de novo* theory, matters little, as there is about an equal amount of evidence in favour of each of these theories.

We regret that space will not allow of our touching upon many interesting subjects in this volume. The chapter on hereditary syphilis is a clear disquisition on this difficult subject. In speaking of the influence of the husband, he says: "If, however, the husband is the subject of decided constitutional syphilis, but has no sores from which direct infection of his wife can take place, the syphilitic semen will nevertheless convey the disease to the ovule." This is a very common statement; but is it true? So far, we have no evidence that physiological secretions are contagious, all evidence pointing in an opposite direction. Still this spermatic germ gets the credit of carrying the syphilitic virus to the ovule, when semen as a secretion is known to be non-contagious. The mother of a syphilitic child (congenital) is, we believe, invariably syphilized, because we never find that she is infected by suckling her syphilitic infant. When the husband is the source of the disease, how does she become infected? By the round about and very unlikely way—spermatic germ, ovule and fœtus—or directly from the blood of her husband, which may be contagious, although he has no open sores at the time. The blood can easily be derived from tears or excoriations during sexual congress. The blood, we know, is frequently contagious. The semen, we have every reason for believing, is not. The direct infection of the wife through the blood or diseased secretions of the husband, and the subsequent infection of the fœtus from its mother, seems the most reasonable explanation, although we fear that such intricate disease processes must always remain matter of speculation.

Finally, we have to notice the treatment recommended. This is none of the half-and-half treatment of modern mercurialists, who mix their mercury with iodide of potassium, and mask it in tonics; but our author gives the downright blue pill guarded with opium, with careful directions, however, to avoid salivation. We cordially endorse his views that foreign baths are quite useless in the treatment of syphilis, and that the mercurial treatment, which is the backbone of the system, can be quite as well carried on at home.

It is well to emphasize the evil effects of excess in alcohol during the course of syphilis. He says: "The mischievous effects of alcoholic excesses have been already referred to, and it is not too much to say that a patient who observes all the rules of hygiene, but takes no medicine, has far better chances of recovery from syphilis than one who freely swallows mercury and the iodide, and at the same time indulges freely in alcohol, and leads a dissipated life in other respects." We strongly maintain that a strictly regular mode of living, without any specific form of drugging, tends more to permanent recovery from syphilis than any other form of treatment. We have read this book with great pleasure and profit, and consider it a clear and trustworthy treatise on the subject.

The Extra Pharmacopœia of Unofficial Drugs and Chemical and Pharmaceutical Preparations. By WILLIAM MARTINDALE, F.C.S., Late Teacher of Pharmacy and Demonstrator of Materia Medica at University College, etc. *With References to their Use, etc., and a Therapeutic Index of Diseases and Symptoms.* By W. WYNN WESTCOTT, M.B. Third Edition. London: H. K. Lewis: 1884.

ON a previous occasion we noticed favourably the first edition, and we are glad to see that it has within a year reached a *third* *edition*. This shows that such a work was required, and that this one has met these requirements.

Since the last addition was made to the British Pharmacopœia in 1874, many new drugs have been brought under the notice of the profession, and are now in every-day use in the treatment of disease. This *Extra* Pharmacopœia gives a description of such drugs, with their preparations and doses, and also their actions and uses, abstracted from the medical journals.

Of late years, also, many active principles have been isolated and employed in medicine; of these, too, this work gives an excellent description. The Therapeutic Index of Diseases is well written, and forms a valuable addition to the work. The publisher deserves great credit for the way in which the volume has been executed. It is a work accurate and succinct, and is sure to have a wide circulation.

Elementary Schools (Dr CRICHTON BROWNE'S Report.) Copy of Mr FITCH'S *Memorandum* relating to Dr CRICHTON BROWNE'S Report. Parliamentary Paper, 1884.

Brain Exhaustion, with some Preliminary Considerations on Cerebral Dynamics. By J. LEONARD CORNING, M.D., New York: 1884.

IN sending Dr Crichton Browne's report to be printed, which he did most unwillingly, Mr Mundella has resorted to the unusual expedient of getting a reply stitched up in the same sheets. The intention obviously was that the suspicions of readers about the infallibility of the Educational Code should be neutralized in the nascent state by the criticisms of one of Her Majesty's Inspectors of Schools. Nevertheless, it is in no way surprising that the appearance of Dr Crichton Browne's report should have been followed by a commotion. The inspectors of schools are a literary class who well understand the influence of the press, and judging Mr Fitch's reply not sufficient, they have rushed simultaneously into print to defend the drag and the net by which their portion is made fat and their meat plenteous. The virulence with which Dr Browne has been attacked in some Scottish newspapers for remarks expressly limited to English schools, shows that fears are entertained that his criticisms may lead to changes in the Scottish Educational Code as well as of the English, as indeed the one is well-nigh a copy of the other.

The question of over-pressure in education has been long brooding in this country, and it is not confined to these islands. Several years ago Dr Petermann published a book on the overtasking of pupils in the schools, and advocated a thorough reform of the educational methods in Germany. The results of the existing educational system in that country he considered to be a culture of superficial character with a tendency to over-wrought brain and nervous weakness. Since the publication of his book it has been several times brought before different medical associations, and cases have been recorded of the injurious results of over-exertion. The prevalence of weak health and short-sightedness amongst German children is believed to be owing in great measure to undue strain in education. It appears, however, that the mental strength of young people is more often overtasked at the higher schools; and one physician, Dr Burghard, found the bad effects of examinations more frequent with girls than with boys, especially with female teachers at the Normal Schools. Complaints of the overburdening of scholars have also come from Sweden, Belgium, and France, as well as from some of the United States of America. As we had read, with great interest, Mr Fitch's thoughtful book on education, we took up his paper with the conviction that he would do justice to the task committed to him; and it cannot be denied that some of his arguments are telling, and that some of the considerations he advances should be carefully held in mind. Nevertheless, after making what inquiries we could on the subject, we are inclined to believe him to be wrong over the main point; and that Dr Crichton Browne has in his report, and the subsequent explanations given in the *Times*, furnished good evidence that over-pressure really exists both amongst pupils and pupil teachers. From the numerous articles and letters which have appeared in the popular and medical press, it is clear that Mr Fitch and his auxiliaries have failed to re-assure the public; and if the public be not re-assured, the Code is doomed unless it be very speedily amended, if such amendment be compatible with its existence. His criticism of Dr Browne's method of inquiry merely amounts to this, that Dr Browne should have expended ten times as much time and trouble before he arrived at any conclusion; but had he taken a hundred times the trouble he has done, Mr Fitch would still have been dissatisfied unless Dr Browne had reached an entirely opposite conclusion.

We are far from insisting that Dr Crichton Browne's verdict should be final. A reasonable certainty can only be reached in the matter by the consensus of a large number of medical men and of teachers. But the methods which Dr Browne has used in his inquiry shows the penetrating power of his intellect. We should recommend all medical men interested in the question, and few medical men can fail to be interested, to get a copy of the parliamentary paper, which only costs tenpence, and not to trust to such travesties of Dr Browne's rhetoric as his adversaries have selected to bring him into discredit. He has a striking and picturesque style; and any candid reader can easily distinguish his tropes from his arguments. We are far from wishing to pass off dogmatic assertions of our own on the merits of the question, and we wish our medical brothers to take it up and try to contribute something towards a sure conclusion. The difficulty of approaching the subject is no doubt great. Even if engaged in extensive practice with children and meeting many cases of nervous disorders, a thoughtful physician will be at a loss to attribute them to any one definite cause. He can never observe the action of one cause separated from others. In fact, there is no one cause for anything; and to determine the effects of over-driving at school amongst other morbific influences is a problem which, though not too great for a shrewd and observing physician, yet cannot be worked out by exact scientific methods. The contention is not that all, or most children, are injured by the exigencies of the Code; but that delicate, backward, ill-fed, and nervous children are over-tasked and over-hurried in order to gain for the school a larger share of the government grant, and that no proper provision or allowance is made for the weakness of such children, or for the existence of an unusually large proportion of weak or dull children in some schools. The natural check for such over-driving is the care and affection of the parents, and the good feelings and common sense of the teachers; but all discretion in the case is handed over to those who, from their position, are not sensible to such considerations. The parents are forced by law to send their children to school at the tender age of five years, and the schoolmaster knows that to keep his place he must satisfy both the school board and inspectors, and that it is expected that a given proportion of his pupils must pass from one standard into another in order that the local rates should be supplemented. "It is possible," as Dr Browne eloquently puts it, "that a cruel tyrant who is ruthlessly over-driving teams of miserable children and sowing broadcast the seeds of disease, might receive the merit grant and be classed excellent, while a humane and wise master, who is gently leading his flock along the path of progress, infusing strength and happiness into many dreary lives, might be condemned by faint praise and deprived of all hope of promotion." . . . . "That the system of payment by results has not done even more mischief than can yet be laid to its charge must, I think, be attributed to the forbearance of the teachers, who temper the Code to the shorn and sickly lambs as far as they dare do so. Many of them practise an unostentatious charity that does them infinite credit, feeding the hungry children from their own table, and taking a kindly interest in those who are outcast. But they are in the midst of a current which is sweeping them on, and which it seems vain to resist. They are in a race in which the faster anyone runs the faster everyone else has to run to keep up with him, and one cannot help fearing that they will degenerate in time."

The object of the Code is not welfare of the children, but the assumed necessity of subjecting all the board schools to an uniform system of inspecting, so that only those should get the grant who appear to deserve it. In framing the Code, the government, in fact, issue definite directions to the inspectors of schools, and this is a certain guarantee of fair play to the teachers; for if the inspectors could lay stress upon any one point, and miss out another according to their fantasy, they would have an amount of arbitrary power which is sure in some cases to be abused. It does not therefore seem that the Code could be better administered by giving greater discretionary powers to the inspectors. It appears to us that the faults of the Code are incurable, and that a totally new system should be devised. If this cannot be carried, we should recommend that no children should be forced to go to school before the age of seven. We have consulted a great many teachers about this, and most of them are of opinion that a child kept from going to school till that age so rapidly makes up to those who have begun their education earlier that no time is really lost. To force children to go to school at five has always seemed to us a hardship. At that age the development of the nervous centres is still going on, and the actual growth of the children is very unequal. Those who have suffered from several zymotic diseases in succession sometimes lose a year's growth or more, and it is cruel to force them to school, where, in addition to the strain on their weakened and excitable brains, they are often exposed to fresh risks of contagion which there is no reserve of strength to meet. As Mr Fitch reminds us, the Code of Mr Foster abolished the standard examination for children of six years of age, and required that no children should be individually examined for the purpose of computing the grant until they had attained the age of seven years. Surely it showed a disgraceful ignorance that there should have been an individual examination of children, for lucrative ends, at so unripe an age. Moreover, these classes of little children, who are often confined in the schoolroom for four and five hours a-day, are still examined collectively by the inspectors, and have, of course, to be pressed on for the first standard at seven years of age.

Though, no doubt, the evils of over-pressure will be most conspicuous with the unhealthy and under-fed children of the poor districts of London, amongst whom Dr Crichton Browne made the most of his observations, we are convinced that he was too hasty in admitting the absence of over-pressure in Scotland. No doubt there are parishes, north as well as south of the Tweed, where it has not been yet observed, but in many parts of Scotland the Code has already brought mischief along with it. Over-forcing in school work has even attracted the attention of one of the inspectors. In Mr Ross's general report for 1881, commenting on the danger of a too ambitious curriculum, he observes:[1] "I notice an increasing tendency to put dangerous pressure upon the children; the system is pressing too hard upon their physical health; too much is exacted from them; the schools are over-staffed, because the children are being over-taught. The drag must be put upon the conveyance, or the rising race shall pay the penalty in diminished physical and intellectual vigour."

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[1] *Report of the Committee of Council on Education in Scotland*, 1881-2, p. 155.

We know that many intelligent schoolmasters hold that the over-driving of nervous and backward children is a distressing operation which has a bad effect upon their health and growth. We should be inclined to strengthen the position of the schoolmaster by guarding him against dismissal at the caprice of the school boards. And instead of having a school board for every small parish they should be grouped together, so that fewer delegates should be needed from each, and better men should be tempted to come forward. We should thus get rid of some of the meddling busy-bodies who often render the position of the teacher so wretched, that we are not surprised to learn that the number of broken-down instructors of youth is much greater than in other professions. It would also be an improvement to ensure that some of the inspectors should have a practical acquaintance with the work by making appointments from amongst the teachers instead of young men from Cambridge and Oxford.

In his work on Brain Exhaustion, Dr Corning asks: "Did ever a board of instructors, engaged upon the codification of a curriculum, so far emancipate itself from the treadmill of tradition as to inquire in how far their efforts were in correspondence with the fundamental laws of psychology and cerebral development, or in how far they were acting in accord with the requisites of mental physiology? We fear not." And he might have added, that there is as little sense and wisdom shown in medical curricula and medical examinations in Great Britain as in any other department where the irresponsible examiner reigns.

In another place he says, "that this system of 'cramming' is one of the most prolific predisposing causes of brain exhaustion is shown by the fact that many children, who in early years had been frequently obliged to discontinue school on account of morbid brain fatigue caused by over-work, have, later on in life, become the victims of more or less chronic cerebral exhaustion." We should think that in New York there must be good opportunities for studying brain exhaustion. In no city in the world is there a more pervading motion and life, a keener struggle for wealth, and a more restless craving for excitement. The subjects about which Dr Corning writes have been frequently treated by American physicians, and always with a certain dexterity. He has chapters on Morbid Fears; on a Certain Lachrymose Condition in Man; on the Causes of Brain Exhaustion; on the Effects of Tobacco and Alcoholic Excesses on the Brain. The book, a demy octavo of 230 pages, is a readable one; and, though some of his remarks are trite, the author shows clearly that much is written from direct clinical observation carefully considered. Dr Corning has a good knowledge of physiology, and a familiar acquaintance with the most recent literature on the subject. The section on the principles of treatment is of most interest. The chapter on the relation of certain kinds of food to the evolution of mental phenomena is weak and ill considered; but the chapters on rest and medication are interesting and instructive, and contain some new methods of treatment which Dr Corning has successfully tried.

In the last chapter on electrization of the sympathetic nerve, with simultaneous bilateral compression of the carotids, Dr Corning recommends a new method of treatment which he has found especially useful in cerebral exhaustion accompanied by congestion. He includes under this category cases of obstinate insomnia and hemicrania.

Part Third.

MEETINGS OF SOCIETIES.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

SESSION LXIV.—MEETING I.

Wednesday, 5th November 1884.—Dr LITTLEJOHN, *President, in the Chair.*

I. ELECTION OF OFFICE-BEARERS.

THE following gentlemen were appointed to act as office-bearers during the ensuing year:—*President*, Henry D. Littlejohn, M.D., F.R.C.S. Ed.; *Vice-Presidents*, David Wilson, M.D., F.R.C.S. Ed.; J. Batty Tuke, M.D., F.R.C.P. Ed.; John Duncan, M.A., F.R.C.S.E.; *Treasurer*, Alexander G. Miller, F.R.C.S. Ed., 11 Walker Street; *Secretaries*, C. Watson MacGillivray, M.D., F.R.C.S. Ed., 11 Rutland Street; Alexander James, M.D., F.R.C.P. Ed., 11 Albyn Place; *Editor of Transactions*, William Craig, M.D., F.R.C.S. Ed.; *Members of Council*, George Hunter, M.D., F.R.C.S. Ed., Linlithgow; James Jamieson, M.D., F.R.C.S. Ed.; J. Graham Brown, M.D., F.R.C.P. Ed.; J. M. Cotterill, M.B., F.R.C.S. Ed.; A. M. T. Rattray, M.D.; A. Moir, L.R.C.P. and S. Ed.; Johnson Symington, M.B., F.R.C.S.E.; P. M'Bride, M.D., F.R.C.P.E.

II. ELECTION OF NEW MEMBERS.

The following gentlemen were elected Ordinary Members of the Society:—William Richardson, F.R.C.S. Ed., Reading, Berks.; Andrew Brown, M.R.C.P. & L.R.C.S. Ed., Kentish Town, London, N.W.; G. J. H. Bell, M.B., C.M. Ed., Barrow-in-Furness, Lancashire; T. Goodall Nasmyth, M.B., C.M., B.Sc. Ed., Cowdenbeath, Fifeshire; Henry Hay, M.B., C.M. Ed., Edinburgh.

III. EXHIBITION OF INSTRUMENTS.

1. *Dr M'Bride* showed a set of ELECTRIC ACCUMULATORS, useful

for electric light (for examination of nose and larynx), galvano-caustic instruments, electrolysis, and supplying motor power (*e.g.*, for driving a drill). Demonstrations were given illustrating each of these points, with the exception of electrolysis, which could not be shown to a large audience.

2. *Mr A. G. Miller* showed a SAW for dividing long bones *in situ*, the invention of Dr John Wyeth of New York. The instrument consisted of two parts—first, a claw by means of which the bone was grasped; and second, the saw, made like a chisel, but with a rounded edge. A very small incision was required to admit the claw. When it was fixed, the saw was run along a groove to the bone. He had tried it on the living subject, and found it work very sweetly and smoothly.

IV. EXHIBITION OF PATHOLOGICAL SPECIMENS.

1. *Dr Byrom Bramwell* showed TWO LUNGS containing patches of pulmonary apoplexy, and a portion of the RIGHT AURICLE of the HEART containing ante-mortem blood-clots; the branches of the pulmonary artery were plugged with very distinct infarctions, which were without doubt derived from the heart. Dr Bramwell had met with seven other cases during the past year in which the pulmonary arteries were plugged with infarctions, and in which there were patches of pulmonary apoplexy.

2. *Dr Allan Gray* showed (*a*) THE LARYNX AND TRACHEA FROM A CASE OF CROUP IN WHICH TRACHEOTOMY WAS PERFORMED. The patient was a child, æt. 15 months. Tracheotomy had to be performed, because of the suffocation which threatened. The croupous membrane was present above the site of the tracheal incision, but was gone below. On several occasions the tube was blocked, and once, it was almost thought, hopelessly, but detachment of the membrane was accomplished by means of a feather. The child died, two days and a half after the operation, of œdematous congestion of the lungs. (*b*) AORTA AND TRACHEA FROM A CASE IN WHICH A SMALL AORTIC ANEURISM RUPTURED INTO THE TRACHEA. The patient was a man who had been admitted to Leith Hospital, breathless and in great discomfort. The history was, that he was subject to chronic bronchitis and, for several weeks before admission, to attacks of breathlessness, from which he had recovered on each occasion without any apparent ill effects. The attack, for which he was admitted, had come upon him just as he was leaving a steamer in the docks. On admission, his case appeared to be one of pulmonary congestion; but examination of his chest, after he had been got quietly to bed, failed to show anything beyond the ordinary signs of a chronic bronchitis. The *râles* heard were sufficient to prevent any exact stethoscopic examination of the heart. There was a feeble pulse, but beyond that little could be made out regarding the condition

of the cardiac organ. In a few hours the attack passed off. The heart and bloodvessels were again examined, but no physical signs of disease observed. A second attack occurred a few days later. From this he also recovered, but a third attack was fatal. He coughed up a large quantity of blood; and was dead. It was quite evident then, as the autopsy afterwards showed, that an aneurism had ruptured into the windpipe. The opening into the trachea was well seen.

3. *Mr Johnson Symington* showed a specimen of ACQUIRED FLAT-FOOT. This specimen was of interest on account of the fact that although the deformity is a very common one there are no specimens in any of the museums in this country. In this case there was a general relaxation of the ligaments, and contrary to the statement of Professor Hermann von Meyer, the inferior calcaneo-scaphoid ligament was increased in length. The most marked displacement occurred at the articulation between the astragalus and the rest of the tarsus. Those interested in the subject were referred to a paper by Mr Symington in the October number of the *Journal of Anatomy and Physiology.*

4. *Dr Argyll Robertson* showed an eye removed for a MELANOTIC SARCOMA AFFECTING THE CONJUNCTIVA OF THE LID AND GLOBE. The eye itself was not affected. There was perfect vision, and ophthalmoscopic examination failed to detect any lesion in the interior of the globe. The history was one of very rapid growth. One month before admission, the patient, a woman, felt a small lump or tumour on the upper lid, close to the oculo-palpebral conjunctival fold. She did not pay much attention till a hæmorrhage from the lid made her consult her doctor, who advised her to come to the Edinburgh Infirmary. On admission, part of the conjunctiva over the globe, as well as over the lid, was found to be affected. During the three days before operation the tumour almost doubled in size. The eye-ball was removed in order to eradicate the whole disease, and because it would have been left without suitable covering had the affected parts alone been removed. Under the microscope, the tumour presented the well-marked appearances of a round-celled soft melanotic sarcoma. Usually this kind of tumour affected the interior of the eye, but in the present instance, and another in which the eye (which was exhibited to the Society) was removed some time previously, the disease had originated externally.

5. *The President* showed (*a*) a specimen of RUPTURE OF THE DIAPHRAGM; (*b*) a specimen of RUPTURE OF ONE OF THE COLUMNÆ CARNEÆ OF THE HEART. (*a*.) The specimen was taken from the body of a female who committed suicide by throwing herself over the Dean Bridge. The rupture, which was four inches in length, occupied the left side of the diaphragm, and allowed of the passage

of the cardiac end of stomach into the left chest. The liver was superficially lacerated, and both thighs were fractured. She was alive when found, but died shortly after. (*b.*) In this case the rupture was found in the left ventricle. Externally there was a slight livid discoloration of the pericardium over the site of the rupture. Deceased was 50 years of age and of intemperate habits. He quarrelled with a man in a public house, and received some injuries to the face. The two in struggling fell to the ground. Deceased was assisted home and left alone in the house. Next morning he was found dead, lying on the floor, and undressed. The heart exhibited, under the microscope, the usual appearances of fatty degeneration.

V. ORIGINAL COMMUNICATIONS.

1. *Dr M'Bride* read his paper ON SOME LOCAL CAUSES OF FŒTID BREATH, which will appear in a future number of this Journal.

Dr Duncanson said he had listened with much interest to Dr M'Bride's paper. He had himself, some years previously, brought before the Society the method of treating cases of ozæna by applications of iodine and bicarbonate of soda. He used these in the form of a spray, worked by foot-bellows. The tubes for irrigating the nasal chambers he had at that time to make for himself. After thoroughly cleansing out the nostrils he applied powdered iodoform, which was then new to most Edinburgh practitioners. Along with constitutional treatment he had found this most efficacious. He should like to ask Dr M'Bride whether his cases were nose-breathers or mouth-breathers. He thought this was a very important point, and he taught his patients to breathe through the nose. George Catlin's book, *Shut Your Mouth,* he thought was most instructive, and always recommended it to the attention of his students. Cases of one-sided ozæna, he had found, were not unfrequently due to the presence of a foreign body. In one instance he had removed what appeared to be a papier-maché button from the nostrils of a boy suffering from this affection, with the result that he completely recovered.

The President said he was reminded, by Dr Duncanson's remarks, of a case that occurred to him when a country practitioner. It was a young girl with one-sided ozæna. She had been to several doctors, but had not derived much benefit. He fortunately detected and removed a foreign body, which he sent to Bennett, then Professor of Physiology, for microscopic examination. It was reported to be a piece of shaving, and the probability was that the girl had put it up when a child playing about some houses that were then being built.

Dr Clouston asked if Dr M'Bride would give them his views as to the possible neurotic origin of ozæna. It sometimes occurred in the younger members of families in which epilepsy, insanity, and allied affections were hereditary. He should like to know if it was not possible that it might be a trophic neurosis. If that was the case, ozæna might be hereditary without being due to a syphilitic infection. He had in his eye three generations in which it appeared, where the chance of such infection was very improbable.

Dr M'Bride, in reply, said he thought that excessive space for nose-breathing was commonly associated with ozæna. The air passing over the secretions dried them, so that they became hard, firm, and adherent to the mucous membrane. He did not think that one-sided ozæna was usually due to the presence of a foreign body. There was in such cases as he had seen an atrophic condition of the nostril present just as in the ordinary form of the malady. In regard to Dr Clouston's question, his observations certainly seemed to point to the probability of ozæna being a tropho-neurosis, but in such cases as those mentioned the possibility of a hereditary syphilitic taint must always be kept in view. He was aware that ozæna was sometimes hereditary, and that possibly without specific taint. At the same time, he was not aware of any observations pointing to an association between ozæna and marked hereditary neurosis.

2. *Mr A. G. Miller* read his paper entitled OPERATIVE TREATMENT AND ITS RESULT IN A CASE OF EMPYEMA, which will appear in a future number of this Journal.

Dr John Duncan did not think any one would be inclined to question the conclusions to which Mr Miller came. In cases of empyema, there were a considerable number, so far as his experience went, in which the most absolute perfection of drainage was unable to complete the closure of the cavity. He had treated a large number of cases of empyema by single openings, and by double openings, and he thought that one might say that in neither way could they rely on the cavity closing without further operation. The consequence was that later on the patient died of amyloid degeneration. This operation of excising portions of the ribs to complete the closure of the cavity had now been frequently practised. According to some, with a very great degree of success; according to others, with but slight success. His experience lay between the two. In many of his cases he found the cavity diminished to a certain extent and then stopped. That, if they considered the mere mechanics of the subject, was what they would be inclined to expect. In one instance he had removed three inches in length from each of five ribs They fell together with remarkable rapidity, but they soon fell no more. The only thing they could rely on in extreme cases was to take out a portion of each rib all the way down. In the case of a small cavity a few ribs might suffice. It must be remembered, however, that the taking away of portions of many ribs added greatly to the danger of the operation. Taking away parts of the upper ribs was a very different thing from removing parts of the lower, because there were certain anatomical structures in their neighbourhood which it might be unpleasant to meddle with. Still it was a question to be considered, whether they should not recognise it as a necessity, if they had to treat a large empyema, to do something as great as that, because the patient, if left alone, would die eventually. He had not yet ventured to do this. Perhaps repeated operations might be safer, and more successful than a single great one.

Dr Byrom Bramwell said he had for some years been in the habit of teaching that where the lung was so bound down by adhesions that it could not expand, and where the chest-wall was so rigid that it could not collapse to meet the lung and fill the vacuum, it was necessary to remove portions of the ribs by excision. A much more important point, however, in his opinion was the prevention of the fixation of the lung by adhesions. With this object, it was of the greatest importance to determine, as early as possible, whether an effusion was purulent or simple. The ordinary symptoms (rigors, sweatings, etc.) were not always conclusive; but there was one means of diagnosis which was quite simple and safe, viz., the puncture of the chest by a hypodermic syringe. Whenever a copious effusion lasted for more than a few days without absorption occurring, then diagnostic puncture should be performed, for simple and purulent effusions require totally different treatment. A purulent effusion in the adult was practically never cured by simple aspiration, though it was sometimes in the child. A purulent effusion in the adult required to be treated either like a large internal abscess and opened under strictly antiseptic precautions by incision (this was the method which Dr Bramwell had been in the habit of teaching as advisable), or the pus should be drawn off by aspiration and replaced by an antiseptic solution. This recent method of treatment seemed to be preferable in many cases to the old method of incision.

Dr James said that, as a physician, he must homologate Dr Bramwell's remarks. He preferred to deal with cases before necessity for such operations arose, but when such cases came before them operation was called for, and he agreed with much that Dr Duncan had said. At the point where the portions of ribs were removed the lung and chest-wall usually came into contact. Successive operations might then be made at parts where they were not in contact and where a cavity remained, and in this way its closure would be assisted.

Mr Miller had much pleasure in listening to the remarks made on his paper. He thought Dr James's point a valuable one. One of the main objects of the paper was to try and disabuse certain minds of the idea that the operation was very serious. It was one that ought not to be delayed under the idea that it was dangerous.

Part Fourth.

PERISCOPE.

MONTHLY REPORT ON THE PROGRESS OF THERAPEUTICS.

By WILLIAM CRAIG, M.D., F.R.S.E., Lecturer on Materia Medica, Edinburgh School of Medicine, etc., etc.

ANTIPYRIN.—Dr Paul Guttmann recently introduced to the Medical Society of Berlin a new alkaloid, which is said to possess powerful antipyretic properties. It is a derivative of quinoline, and is prepared synthetically. It is a white crystalline powder soluble in water and almost tasteless. It has been named provisionally antipyrin. Professor Filehne has employed it experimentally, and finds that it may be given safely in doses of 2 grammes every hour, till six grammes are taken. May has tried it in the hospital of Cologne in the treatment of typhoid fever, and considers that as an antipyretic it is far superior to quinine. Rank expresses himself equally decidedly, as the result of fifty observations made on hospital patients at Stuttgart. Guttmann's trials have been even more extensive, his cases numbering 120 in all; 12 of them were typhoid fever, 8 pneumonia, 3 scarlet fever, and others intermittent fever, typhus, etc. In every case there was high fever. Given in doses of half a drachm hourly for three hours, antipyrin was observed always to cause a marked fall in the temperature, which lasted five or six hours, or even longer. In the first hour following the administration of the medicine, the temperature usually fell half a degree, the decline becoming more marked during the second hour, and attaining its maximum towards the termination of the third hour; as the temperature falls there is profuse perspiration. No unpleasant symptoms were noticed, with the exception of a little occasional vomiting. The only febrile disease in which no beneficial effect was produced was intermittent fever. The alkaloid is freely soluble in water, so that if necessary it might be given hypodermically. It is apparently about half the medicinal strength of sulphate of quinine, 4 grammes being equivalent to about 2 grammes of quinine; it is a somewhat expensive remedy taking this into consideration, for its market price is only a little less than that of quinine itself. Dr Tillmans speaks favourably of the use of antipyrin in cases of phthisis; he has given it uninterruptedly for months together to tubercular patients, and has succeeded in keeping the temperature almost normal the whole time; in pneumonia he finds that it is absolutely necessary to give it in large doses, or it completely fails to control the course of the disease.—*The British Medical Journal*, 8th November 1884.

HYPEROSMIC ACID IN NEURALGIA.—In Tübingen, as well as in

Kiel, experiments have recently been made to determine the action of hyperosmic acid (*Deutsch Med. Zeit.*, 1st July 1884). This drug was first recommended in malignant tumours into whose parenchyma the acid was injected. In both localities the result has been *nil*, the inflammation ensuing exerting no influence on the malignant character of the new growth. As well known, Dr Winiwarter was the first to bring the remedy to the notice of the profession. Dr Neuber, in Kiel, accidentally employed the hyperosmic acid in several cases of peripheral neuralgia which had not yielded to other drugs. He reports three cases where a daily subcutaneous injection of the acid was employed. He made use of a one per cent. watery solution, of which from four to six drops sufficed for each injection. Selecting the locality most affected by the pain for the hypodermic application of hyperosmic acid, he found that in each of three cases of neuralgia, though they were of stubborn character and had thus far withstood every possible treatment, the effect of the acid was magical, the pain, after a few applications, ceasing and in no instance returning. The injections themselves were neither very painful, nor followed by suppuration, nor accompanied by poisonous side effects. There are many cases of superficial neuralgia which apparently are incurable until some new remedy is tried to which they at once yield. The more physicians report such cases the sooner will the conditions be determined under which each antineuralgic remedy may be expected to act promptly (*Medical and Surgical Reporter*).—*The Therapeutic Gazette*, October 1884.

MANACA (*Franciscea Uniflora*).—It is claimed that manaca is cathartic, diuretic, emmenagogue, anti-syphilitic, and anti-rheumatic, or, in other words, an especial remedy in rheumatism. It is its use as a remedy in rheumatism that I wish to call the attention of the readers of the *Kansas Medical Journal* to. I have been using manaca as a remedy in rheumatism now nearly two years, and must say that it has given more satisfaction than any other remedy I have ever employed in treating chronic rheumatism. One thing in its favour, it is pleasant to the taste, the dose is small, there is very little disagreeable feeling following its use. The greatest thing in its favour is the promptness of its action. If it is going to prove curative in a given case, it will not be many days about it. Writers do not lay down any special indication for its use, only the general term chronic rheumatism is given as an indication for its employment as a remedy in rheumatic affections. The term acute rheumatism is unmistakable, but that of chronic rheumatism is vague, and prone to lead to error, for it may imply rheumatoid arthritis, articular or muscular rheumatism. Ordinarily this distinction is clearly drawn, and essential that the pathological changes may be known, and the remedy selected. Unfortunately, the reporters of manaca in rheumatism have ignored this distinction. My opinion is that it is more certain in chronic muscular rheumatism than either of the other varieties, as it has direct action on the diseased muscle, though I have good results from its use in chronic articular rheumatism. I have used manaca in twelve cases together; in ten it was curative, in two it did no good (Dr J. Berger in the *Kansas Medical Journal*).—*The Therapeutic Gazette*, September 1884.

THE TREATMENT OF RINGWORM.—I desire now to call attention to another treatment for recent ringworm when it does not extend over any large extent of surface. It is not a new remedy by any means, but, I believe, a new way of naming a well-known parasiticide. I have been trying for some time to find out what vehicle penetrates most deeply into the hair follicles, and think it is chloroform. Chrysophanic acid is a very good parasiticide, and, though it is insoluble in spirit and ether, yet it is soluble in chloroform. Chloroform also dissolves the fatty matter out of the hair follicles, and thus allows the parasiticide dissolved in it to penetrate deeply. During the last year, I have used a solution of seven grains of the acid to the ounce of chloroform to all cases of recent ringworm, and believe it is the most efficient treatment I have yet tried. The small patches should be carefully marked out by cutting the hair very closely on them, and the chloroform solution should be well pressed and dabbed into the places with a minute sponge-mop for five minutes, two or three times a day, according to the amount of irritation produced. The aim of the treatment is not to produce scabs, but to get the solution to penetrate deeply. The sponge-mop should not be much larger than a big pea, and should be continually dipped into the chloroform bottle, as the solution soon evaporates whilst it is pressed into the diseased spot, and leaves the yellow acid dreg on the place. Great care must be taken that the solution does not run on to the forehead or into the eyes, and that the person using it does not inhale the vapour. I always give full directions about the care necessary in using such a potent remedy, and only employ it to small places of the disease. It is well for the nurse to keep her face away from the sponge, and to use the chloroform in a current of air, and not in a small room. The places should be well washed every morning with hot water and soap, to remove any sebaceous matter or crusts, and the hair should be kept closely cut on them till the new hair appears, which is generally in about two or three months; but the remedy should be continued till all the diseased stumps have come out.—Alder Smith, M.B., F.R.C.S., Christ's Hospital, London, in *British Medical Journal*, Nov. 1, 1884.

OCCASIONAL PERISCOPE OF DERMATOLOGY.

By W. ALLAN JAMIESON, M.D., F.R.C.P., Extra Physician for Diseases of the Skin, Edinburgh Royal Infirmary; Lecturer on Diseases of the Skin, Edinburgh School of Medicine.

ERYTHEMA MULTIFORMA AND PURPURA RHEUMATICA EVOKED BY INFLAMMATION OF THE THROAT.—Cæsar Boeck of Christiania—after referring to a previous communication of his on the connexion which various rheumatic affections, particularly ordinary febrile arthritis (Gichtfièber) and erythema nodosum, mutually possess—alludes to the relationship which has in recent years been noticed between angina and acute articular rheumatism. He then takes up the question of the position of the polymorphic erythemata and purpura rheumatica to acute rheumatism and to angina, and relates two cases which bear on this. In the first, a mechanic, aged 23, suffered from an inflamed throat accompanied with pain in swallowing. Eleven days after the commencement of this, and while its symptoms had not quite disappeared, a characteristic erythema multiforma developed on the backs of the hands. Stiffness in the right knee and elbow and other joints came on before the erythema had faded. The second patient, a coachman, aged 42, had often before had feverish sore throat. A well-marked follicular angina attacked him, and left him weak. Within a month, and before he had quite recovered, pains of a rheumatic nature seized his muscles. He was treated with salicylic acid, and in four days a purpuric rush commenced suddenly on both legs. These disappeared while the salicylic acid was being taken, to recur twice when it had been discontinued. Boeck thinks that perhaps the tonsils were the channels by means of which a specific infection was introduced into the system, of which the rheumatic pains and the cutaneous eruption were the expression. But the fact that not merely a follicular tonsillitis but a phlegmonous angina could be the precedent, points rather to the seat of the inflammation, than to some specificity in its nature, as the cause at work. One should, with reference to this, bear in mind the numerous nervous connexions between the throat and the sympathetic and medulla oblongata, the chief seat of the vaso-motor centres. An inflammation of the throat could very easily set up irritation in this centre. This obtains some support from the process in scarlet fever, which commences with angina from the onset of rheumatism and from the skin affection which accompanies diphtheria, described by Dr Robinson and Dr Eugen Fraenkel. The scarlatinal rheumatism may also be associated with the throat symptoms in that disease. That peripheral irritation leads to the production of the polymorphic erythemata may be argued from what results frequently during the treatment of the syphilitic by syphilization, for these eruptions are of far more frequent occurrence in those treated in this way than by other methods. Boeck regards purpura rheumatica as only another form of expression of the same primary disease, and with Auspitz prefers the term "essential erythanthema" as including both it and the polymorphic erythemata. A case of urticaria following two days after the appearance of a follicular tonsillitis is also related, and the similarity which this affection bears to the class of essential erythanthemata is alluded to.—*Vierteljahresschrift für Dermatologie und Syphilis*, Heft 4, 1883.

RESORCIN IN THE TREATMENT OF POISONED WOUNDS.—Justus Andeer relates a series of cases where severe local inflammation, accompanied in some with lymphangitis, and general constitutional disturbance followed wounds on various parts of the body. Some of these were dissection wounds, others poisoned by the contamination of chemical agents. In all the instances narrated the inflammation subsided, and the pain and constitutional symptoms ceased within a few hours after the application of a resorcin-vaseline salve. The strength of this is only given in one case, equal parts of each; in the others the percentage of resorcin is said to have been high. That absorption of the resorcin took place was shown by the urine assuming a brownish green colour. The details of the cases are given.—*Monatshefte für praktische Dermatologie*, July 1884.

TREATMENT OF THE SOFT CHANCRE BY IODOFORM.—Unna finds that for the present no remedy heals the soft chancre more rapidly than iodoform, and none with such certainty obviates the occurrence of a suppurating bubo. The drawback is the peculiar and suggestive odour which no combination serves entirely or permanently to mask. One cause of the diffusion of the odour is the custom of employing iodoform in powder, too much, more than necessary is thus applied, and the powder is apt to be deposited on the clothes during or after application. He therefore advises that iodoform dissolved in ether be used. The sore is first dried with absorbent cotton, then a drop of the iodoform ether allowed to fall on the sore, and the evaporation of the ether favoured by blowing on it with a hand-ball bellows. Thus a thin coating of iodoform is deposited exactly on the ulcer. Over the ulcer so coated he places a small piece of perforated iodoform plaster muslin, which has been brought to perfection as regards its preparation by Beiersdorf, Altona. If this appears too thin, a circular band of the same can be wound round the penis, or a strip applied if the ulcer is seated elsewhere. Lastly, to conceal the smell, a piece of cotton-wool, perfumed by means of a spirituous solution of cumarin, is placed over all. If desirable, this wool can be sprayed over with some volatile aromatic fluid. When the ulcer occurs in the meatus urinarius, he supplies the patient with a pencil of iodoform composed as follows:—

℞	Iodoformi, . . .	10·0
	Gummi Arabici, . .	3·0
	Gummi Tragacanthæ, .	1·0
	Glycerini, . . .	1·0
	Aq. *q. suff.*,	Misci fiat bacilli, N. 5.

These are kept in a little wooden box. After voiding urine, the pencil, made pointed, is dipped in water and several times introduced with a screwing motion into the meatus. A small piece of the perfumed wool is now passed in between the lips, and a larger piece wrapped round the glans. Unna further remarks that these pencils serve as valuable prophylactics against infection from gonorrhœa or soft sore.—*Monatshefte für praktische Dermatologie*, August 1884.

OLEATE OF COPPER IN THE TREATMENT OF PARASITIC DISEASES OF THE SKIN.—Dr le Sieur Weir, of Philadelphia, relates his experience in 500 cases of parasitic disease of the skin treated by this remedy. The oleate used was the chemical combination introduced by Dr Wolff, and obtained by the decomposition of a sodium oleate by sulphate of copper and subsequent purification. This was made into an ointment with vaseline in proportions varying from one drachm to six drachms to the ounce, the milder cases yielding to the weaker, the most severe requiring the strongest. The mode of application in tinea tonsurans was as follows:—The hair was cut off close to the skin for a space of an inch to an inch and a half beyond the affected region. The parts were then anointed with oil, fluid cosmoline, or glycerine, or poulticed with bread and milk. In this way the scales or crusts were dislodged if these were present. If there had accumulated much scurf or dirt, the parts were thoroughly scrubbed with Castile soap and warm water. Then an ointment of the oleate of copper, of a strength proportioned to the severity of the case, was gently but thoroughly rubbed into the diseased patches. The head was then covered with some light material. The inunction was repeated at least twice daily—this, however, being usually sufficient. Unless an accumulation of a scab-like substance appeared, it is neither necessary nor desirable that the part should be washed except at infrequent intervals. Not uncommonly a change for the better was observed after the third application, and more especially if the case was a mild one; often seven or eight days sufficed for a cure. In severe ones the period varied from ten days to three weeks, though exceptionally obstinate cases needed even longer periods than this. Of the 500 cases, 92·2 per cent. were due to the trichophyton tonsurans. The cases of eczema marginatum yielded to a mild ointment, and most of those of parasitic sycosis did so also, though three required a stronger ointment for cure. Tinea versicolor also yielded easily, but the plan does not seem to possess any advantage over other methods. In favus though without epilation there was some success; epilation certainly hastened the result. In a few cases a tendency to the development of blind boils seemed traceable to the use of the ointment. A number of the cases of ringworm of the head, included in the 500, were never seen personally by the author, but were treated apparently by correspondence; and he states with regard to these, "the diagnosis of ringworm was easily effected, and *proved* by the uniform recoveries resulting from treatment." (No mention is made of the means by which evidence of the cure was obtained; whether this was decided by mere ocular inspection, or whether a microscopic examination of the hairs was instituted. It would have been more satisfactory if this had been stated).—*New York Medical Journal,* August 30, 1884.

In a paper entitled, *The Oleates: Further Investigations into their Nature and Action,* Dr Shoemaker, of Philadelphia, states that the oleate of copper is most successfully employed in the treatment of the parasitic diseases of the skin. He prefers to unite it with lard in compounding the ointment, as he believes that it thus penetrates more certainly into the follicles than when mixed with vaseline. He also interdicts the use of water to wash with during the treatment, as he believes this both assists in nourishing the parasite and makes it more active. To cleanse the part if necessary, he prefers oleic acid, ether, or alcohol.—*British Medical Journal,* October 18, 1884.

In a lecture on HYPERIDROSIS, Fox relates the following:—"A story is told of a celebrated young comedian who was subject to unilateral hyperidrosis of the face. One night he appeared upon the stage as an old man, the face being made up to suit the part. As the play proceeded, the merriment of the audience became excessive, and the unusual and seemingly uncalled for shouts of laughter which greeted his acting surprised and perplexed him. On retiring behind the scenes, he found that the unilateral perspiration had washed the paint from one side of his face, which had presented to the audience the appearance of wrinkled age upon one half and blooming youth upon the other."—*Philadelphia Medical Times,* August 23, 1884.

OCCASIONAL PERISCOPE OF THE DISEASES OF CHILDREN.

By CHARLES E. UNDERHILL, M.B., F.R.C.P.E., Physician to the Royal Hospital for Sick Children.

THE SYMPTOMS OF RICKETS CONSIDERED IN RELATION TO THEIR ANATOMICAL ORIGIN.—The most striking feature in the microscopic anatomy of rickets is the hyperæmia and increased vascularity of all the tissues, and especially of those in which the growth of the young bone is going on. It is to be seen in marrow, cartilage, and periosteum, as well as in the bone itself. Indeed, a new formation of blood-vessels takes place, and vessels are to be found in places where normally there are none. This increased vascularity must be considered the primary lesion out of which all the others arise. It acts in two ways: firstly, it disturbs the course of development of the growing bone; and, secondly, it sets up unhealthy processes within bone already formed. In the growing bone excess of nutritive material causes excessive proliferation of cartilage cells, and a consequent loss of firmness in the cartilaginous tissues; the cells are increased in size and number, and the matrix is also more abundant and softer than usual. There is also an increase, in the earlier stages of rickets, of the area of ossification; but the bone thus formed does not become thoroughly firm, because the involution of the vessels, which is a necessary process in the formation of healthy bone, does not take place. The result is a loosely-formed bony tissue wanting in compactness and solidity. In the bone already formed, the hyperæmia of the surrounding tissues has an equally disastrous action; the normal processes of absorption and addition are disturbed, absorption taking place more rapidly, while the newly-added material is less rich in chalky salts—the whole bone substance thus becoming more yielding and wanting in strength. In this manner the bones may become, in severe cases, quite soft and elastic. A careful examination of the dissected bones often shows minute fractures of the bony shell, these fractures occurring most frequently on the convex side of the bent parts. But it is impossible to make them out on the living subject. Complete fractures with crepitus and displacement are very rare. The pathology of rickets being as above described, the process of cure consists in a converse movement: the hyperæmia ceases, the superabundant bloodvessels are gradually obliterated, this involution being accompanied, as is always the case both in normal and pathological growth of bone, by a concentric deposit of new bony tissue in the area of the obliterating vessels,—the new bone thus deposited becoming exceptionally hard and dense. After laying down these principles as applying to rickets in every situation, the author proceeds to consider at great length the changes which take place in the individual bones. The paper is to be concluded in a future number.—M. Kassowitz, *Jahrbuch für Kinderheilkunde*, Band xxii. p. 60.

ON SIMULATED DISEASES IN CHILDREN.—This subject has met with less attention than it deserves in professional writings; and yet cases in which serious diseases—such as epilepsy, and kindred spasmodic and convulsive disorders, paralyses partial or general, neuralgias in different localities, and constant vomiting—have been simulated for weeks and months together without exciting suspicion, are not uncommon. They are met with far more commonly in girls than in boys, and are well worthy of closer attention, both with a view to their detection and consequent cure, and on account of the light they throw on the moral and psychical condition of the subjects. Such cases of simulation have their origin sometimes in the desire for sympathy or the luxuries which a sick-room affords, sometimes in the wish to avoid hard and unpleasant work, sometimes in pure imitation. An instance of the last form is given, in which a number of girls, of ages varying from ten to fourteen, were brought from an orphanage into hospital, one after another, suffering from simulated spasmodic epileptiform attacks. The symptoms simulated may be either of a subjective or objective character: of the former are pains and disorders of hearing, speaking, or vision, palpitations, dyspnœa, cough, and so forth. Among the latter, convulsions, epilepsy, and paralysis are the most common. In one case a simulated paraplegia of twelve months standing was unmasked, by making the child fast for one day and then leaving tempting food within sight in another part of the room. When the child thought there was no one to see her, she got out of bed and walked to where the food was placed. Such cases are often difficult to unmask. Suspicions are aroused, in the case of the subjective symptoms, by their constant recurrence under one set of conditions and no others—that is to say, the symptoms are stationary and do not progress; and, secondly, by the look and general appearance of the child, which, from want of due self-control, are apt to betray the presence of a secret, something it wishes to hide. Pretended objective symptoms, epilepsy or the like, are detected either by excess of action or by an imperfection in carrying out the details of the simulated disease. They either overact or underact the part. The author proceeds to attack the case by first winning the confidence of the child by kindness and attention, and then coaxing it to repeat and vary the manifestations at will. The nature of the case being thus cleared up, a confession is made to follow. Should this means fail, other similar dodges are tried. This interesting paper concludes with the record of a number of cases in which full details are given.—Dr Julius Eröss, *Jahrbuch für Kinderheilkunde*, Band xxi. Heft 4.

HÆMATURIA DUE TO CANCER OF THE KIDNEY IN CHILDHOOD.—Cancer of the kidneys in children is most common in the first years of life. Out of fifty cases which have been recorded in children under ten years of age, twelve occurred in the first year and eight in the second. Forty occurred in the first five years, as against ten in the last four. The sexes are liable in about equal proportions. Hæmaturia is a more frequent symptom among children than in adults. It was noticed in nineteen of the fifty cases collected in this paper. On the other hand, it is not a common symptom in the earliest years; only two out of the twelve cases in the first year, and three of the eight cases in the second year suffered in this way. The bleeding usually occurs suddenly and unexpectedly, and is not unfrequently the first evidence of kidney disease. It is usually profuse, and when observed at all it is early in the course of the illness. It is not always accompanied by pain, but when it is the pain ceases when the bleeding is fully established. This is an important point in the diagnosis of cancer from stone in the kidney. Another point is, that in cancer the blood is pure without any admixture of mucus, pus, or epithelium. In none of the fifty cases is it recorded that cancer masses were found either in the urine or in the blood. The bleeding generally recurs several times after pauses of longer or shorter duration. It is rare for it to occur for the first time at a late period of the disease. In only one of the cases is it stated that death was directly due to the bleeding.—A. Liebert, *Jahrbuch für Kinderheilkunde*, Band xxi. Heft 3.

A CONTRIBUTION TO THE THERAPEUTICS OF DIABETES INSIPIDUS.—This disease, though rarely dangerous to life, is injurious to health and very intractable to treatment. A case of rapid cure is therefore worth recording. A child eleven years old, born of healthy parents, was brought to hospital with the history of having suffered from gradually increasing thirst and polyuria for nine years. She was well-grown but pale, skin dry, temperature normal, organs healthy, general health fair, urine 7 to 8 litres per diem, sp. gr. 1001, no albumen, sugar, or sediment. She drank about 9 litres of fluid per diem. Salicylate of soda in half gramme doses in a week brought the urine down to 5 litres, where it remained. She was then given valerian root, as recommended by Trousseaux, 5 grammes infused in one hundred of water. The urine soon fell to near 2½ litres, and remained stationary for ten days. Lastly, ergot was tried, as advised by Tillard and Sidney Ringer. Under the use of this drug the urine was further diminished to a little over 1 litre a day, and remained at that figure as long as the child continued under observation, *i.e.*, three weeks after all medicines had been suspended. The lessening of the quantity of urine was accompanied by a most satisfactory increase in the bodily weight and improvement in the general health.—Dr N. Lunin, *Jahrbuch für Kinderheilkunde*, Band xxi. Heft 4.

THE HYGIENIC MANAGEMENT OF THE SUMMER DIARRHŒA OF INFANTS.—*Preventive Measures.*—Avoid weaning during hot weather. If it be unavoidable, give a food which most nearly resembles human milk; give it in proper quantity. By a series of experiments, in which children were weighed before and after each nursing, it was found that, under five weeks old, the average quantity of milk taken from the breast during each twenty-four hours was 12·41 fluid ounces. This was the result of twelve observations, the quantity varying considerably in the different cases—that is, if a baby during the first five weeks takes the breast every two hours, it receives little more than one fluid ounce at a time. Similar observations on fifteen older children, up to ten months, showed the average daily quantity to be 24·6 fluid ounces, *i.e.*, about three ounces at a time, supposing there were eight nursings in the twenty-four hours. A further great preventive is purity of air.

Curative Measures.—Procure the best possible food. If breast milk cannot be got, cow's milk is the best substitute; but it must be modified so as to resemble breast milk as nearly as possible. The most important suggestion is the "peptonizing" of milk, as practised by Pfeiffer, of Wiesbaden. This is done, as follows, in the New York Foundling Asylum:—Five grains of extractum pancreatis (Fairchild & Co.'s), and ten grains of sodium bicarbonate are added to one gill of warm water. This is mixed with one pint of warm milk, and the mixture in some convenient vessel is placed in water kept heated to 100 ° Fahr. for one hour, or less if it begins to be bitter, when it is placed upon ice to prevent further digestion. This method of peptonizing digests the caseine to such an extent as to make it nearly resemble the caseine of human milk. Failing this, dilution with thin barley water makes a good food, and is the next best substitute. After the age of six months some farinaceous food may be given—the best is wheat-flour prepared by long boiling; occasionally for older children raw-beef juice is an excellent remedy. Removal to the fresh air of the country is a most valuable adjunct.—J. Lewis Smith, M.D., *Archiv. of Pediatrics*, July 1884.

PERISCOPE OF GYNÆCOLOGY AND MIDWIFERY.

By J. Milne Chapman, Inverness.

Cardiopathy of the Menopause. Clément (*Lyon Médical*, Aug. 3–10, 1884.)—In this paper the author deals with a peculiar functional disorder of which he has had occasion to observe several examples. The patients presented all the symptoms of a profound disturbance of the cardiac functions without any physical signs of valvular lesion. The age at which the first symptoms appeared was from forty-six to fifty years. The patients presented nothing striking in their personal or hereditary history. They were all well built, healthy women, accustomed to manual or household labour, but never exposed to excessive fatigue such as might occasion cardiac hypertrophy. Some had borne children, others had never been pregnant. There was no hysterical element in the cases, nor had any of them suffered from rheumatism. The first symptoms appeared before the menses had ceased entirely, but when they had become irregular either in their time of recurrence or in the amount of the flow. The onset was gradual. During an indeterminate period, for perhaps two or three months, the women suffered from an indefinite feeling of malaise, their strength diminished, and they were less able to resist fatigue, and finally they began to suffer from palpitation. The evolution of the disease, while progressive, is yet interrupted by intervals more or less extended of apparent health, but each recurring attack is more severe than the preceding one. The palpitations are soon followed by dyspnœa on exertion, although there is not the slightest difficulty of breathing when at rest. Sleep, however, is often broken by distress in the region of the heart. After a time all these symptoms become very marked upon the slightest movement, and are only alleviated somewhat when the patient sits perfectly still in the chair. Another phenomenon is a feeling of faintness, which goes on sometimes to actual syncope. The examination of the heart gives a negative result. The cardiac impulse is a little exaggerated, the rhythm may be irregular, but the valvular sounds are distinct and without the faintest murmur, the first sound being somewhat the weaker. There is, however, an extreme rapidity of the heart's action, the pulse-rate being often 150 to 160 to the minute. At first there is no œdema, but after three or four attacks there may be a slight swelling about the malleoli or in the integument over the hypogastric region. Whatever may be the intensity of the cardiac symptoms, there are no bronchial nor pulmonary disturbances. The dyspnœa is entirely of cardiac origin. There is never any venous stasis, but there is an evident spasm of the arterioles. There is a remarkable pallor of the face, which is due, the author believes, to this vascular spasm rather than to anæmia. The urine is in general abundant enough, except at the height of an attack, when its excretion may be nearly suppressed; it never contains any albumen. The course of the affection is peculiar, occurring as it does in paroxysms separated by intervals of varying duration. As the disease advances the intervals of remission grow shorter. The attacks last usually about a week, but might be of longer duration were it not for medical intervention. The affection continues for an indefinite period, but the prognosis is favourable despite the apparently grave symptoms of dyspnœa, œdema, weakness, etc. The disease subsides as it began, the intervals of health growing longer and the paroxysms shorter and of less intensity. The cause, the author thinks, is to be found in a modification of innervation by the great sympathetic, and especially in excitation of the cardiac nerves. The treatment is by means of large doses of infusion of digitalis, beginning with an infusion of eight grains of the powdered leaves, and reducing gradually to five grains. Sometimes the patients acquire a disgust for this drug, and then Dr Clément substitutes the alcoholic extract of convallaria maialis in the dose of fifteen to twenty grains. But the results are much less satisfactory than when digitalis is employed. The paroxysms of dyspnœa are best relieved by the preparations of opium, more especially morphine. At the same time, of course, the patients should remain as quiet as possible and avoid anything that may cause mental or physical disturbance.

TWO CASES OF THE ALEXANDER-ADAMS' OPERATION FOR DISPLACEMENT OF THE UTERUS. Millar (*Glasgow Medical Journal*, August 1884).—Both the cases operated upon were successful. Dr Adams, in commenting upon them, says that these cases show the immediate relief that may be obtained from this operation in cases of prolapse. There is, however, some risk of the operation becoming discredited from two causes. Thus it requires considerable experience to recognise, catch up, and manipulate properly the ends of the ligaments. The least rough handling may tear them, and too much poking within the wound by unskilful exploration is apt to produce a condition favourable to hernia, and favourable to the induction of suppurative action. Then in cases of old retroversions or flexions, in which the posterior portion of the fundus uteri has become more or less hypertrophied, the operation will only yield partial immediate relief, and it is through time alone that the altered circulation will affect the dense uterine tissue, and alter for the better the nutrition of the organ. That it does do so is shown in one case in which menstruation has been re-established after a long lapse of years. It is better to cut off about one inch of the ligament, as the extremity usually sloughs. The manipulation required even in experienced hands the writer regards as an obstacle to the chances of getting the wound to heal by first intention; but, with more frequent opportunity, he is becoming sure that this may be obtained in the majority of cases. The catgut used should be prepared to withstand the action of the tissues for ten days; and, in addition to stitching the ligaments to the pillars of the ring, the sutures bringing the external wounds together should pass through the ligamentous tissue that projects from the ring.

A SUCCESSFUL CASE OF ARREST OF TUBAL PREGNANCY BY GALVANISM. Paul F. Mundé (*N. Y. Medical Record*, September 27, 1884).—The patient whose case is reported was thirty-eight years of age, and had had one child eight years, and a miscarriage six years previously. The existence of a right tubal pregnancy of about ten weeks was diagnosed by Drs Emmet and Mundé, and the latter with commendable alacrity proceeded to treatment notwithstanding the considerably prostrated condition of the patient, the result of her two examinations. He placed a leather-covered button electrode in the rectum, and the other pole, a flat sponge, on the abdomen over the mass. He gradually brought twenty-four cells into connexion, and rapidly broke the current a dozen times or more. The sitting lasted ten minutes, and the shocks were quite painful. Next day the patient was in a profound state of collapse, but the writer did not regard it as due to rupture of the sac, and on making a gentle vaginal examination he found the outline of the mass as defined as formerly. Hypodermic injections of brandy and ammonia were given every fifteen minutes. At the end of a week she had rallied sufficiently to warrant a continuance of treatment, though, from the feel of the mass and the alteration of the breasts, it was presumed that death of the ovum had been already occasioned; and accordingly six further applications of the battery were employed. The mass gradually decreased in size, and the patient perfectly recovered.

ON THE USE OF THE OBSTETRICAL FORCEPS AS A SPECULUM AND PROTECTOR TO THE VAGINA IN OPERATIONS UPON THE FŒTUS IN UTERO. Price and Faught (*Philadelphia Medical News*, August 2, 1884). — The title of the above paper sufficiently explains its purport. In using the forceps after the manner referred to, a pair as wide in the blades as the diameters of the pelvis will permit are applied in the ordinary manner, and used for fixation and compression of the head, while the vault is perforated and broken or folded up. If preferred by the operator, the blades may be separated to their respective sides of the pelvis and held by assistants, recrossing and locking them when necessary to make traction and compression.

THE TREATMENT OF PREGNANCY AND LABOUR WHEN COMPLICATED BY CANCER OF THE UTERUS. Gœnner (*Zeitschft. f. Geb. und Gyn.*, Bd. x. Hft. 1).—Six cases are recorded in this paper, and, after a review of the literature of the subject, the following is laid down as the appropriate method of treatment:—Laparotomy is only indicated in cases where the disease has so implicated the neighbouring parts that a sufficient removal of the growth by the vagina to allow passage of the fœtus would inevitably lay open bladder, rectum, or peritoneum. In other cases the advice is given to await the onset of pains, and to watch carefully their effect at dilatation. Thus the operator is enabled to judge at what portion the growth is to be removed, and where incisions into it will suffice. Then as much of the tumour is to be removed by écraseur or galvano-cautery as is possible without opening into the neighbouring organs; or, where the disease is rather an infiltration than a distinct tumour, incisions will make the necessary opening. Extraction is then to be accomplished. The third stage should not be permitted to last long. The cases recorded occurred in Bischoff's service at Basle. Five out of the six mothers recovered; and only one out of the six children was lost, and that one was born asphyxiated. In the case where the mother died, Freund's operation was performed.

THE DELIVERY OF THE AFTER COMING HEAD. Frendenberg (*Archiv. f. Gynäk.*, Bd. xxi. Hft. 1).—This paper is based on most elaborate statistics of twenty-one years' cases in Birnbaum's clinique, and the statistics are particularly fully worked out. The author arrives at the conclusion that the best method of delivery is what is known as the Prague method, consisting in placing the right hand on the shoulders of the child, with the fingers on the occiput, and extracting with the left hand by means of the feet, downwards and up over the mother's abdomen; and he considers that, should this method fail, resource should at once be had to the forceps, for the use of which he lays down the following general indications:—1. In backward rotation of the occiput and extension of the chin under the symphysis pubis; 2. In backward or lateral rotation of the face, with lack of flexion and with impaction; 3. Where speedy delivery is called for; 4. Where the rima pudendi or vagina is narrowed, or will not yield readily; 5. Where the hand is tired from attempts at manual delivery; 6. Where the head remains in the pelvis rotated to the side; 7. Where, from the side of the mother, rapid delivery is indicated from metrorrhagia, eclampsia, etc., the child being dead and manual delivery failing. The contra-indications are: 1. Spasmodic contraction of the os around the neck of the child; 2. Pelvic deformity of high degree; 3. Great size of fœtal head.

PERISCOPE OF MEDICINE, CLINICAL AND PATHOLOGICAL.

By G. A. Gibson, M.D., and William Russell, M.D.

Dilatation of the Stomach in Children.—As a result of the observations made by M. Bouchard on the frequency of dilatation of the stomach in adults, to which we referred at some length in a previous number, we have a long and valuable paper from Dr J. Comby on a similar condition in children. He records a large number of cases in which the condition was present. The physical signs are distension of the central part of the abdomen, while the flanks remain lax, with tympanitis, and splashing. The directions for obtaining the splashing or rippling sound are as follows:—The child is laid on its back on its mother's knee, the left hand flexes the thighs on the pelvis, while the fingers of the right are used to percuss the region of the stomach. If the splashing sound is elicited as low as or below the umbilicus, the dilatation is considerable. He attributes the condition entirely to improper feeding. It is accompanied with various gastro-intestinal symptoms of a catarrhal type, while nervous symptoms may also be present, as fits, nocturnal terror, etc. Various skin eruptions and enlarged glands accompany many of the cases. Rickets he has found constantly associated with the condition, and argues that the stomach affection is the primary lesion. He regards children in whom the lesion is allowed to continue as badly armed for the "struggle for life." His more general position is that the digestive tube is the axis round which all the pathology of infancy gravitates, after allowance is made for congenital and hereditary maladies. The treatment to be adopted is mainly dietetic.—*Archives Générales de Médecine*, August and September 1884.

The Intra-Cardiac Nerves in Affections of the Heart.—Putjatin has studied this question in cases of hypertrophy with valvular lesion, and finds that in chronic cardiac affections the ganglia are inflamed. The change may be only one of hyperæmia and granular degeneration, as in the less severe cases. In more chronic cases there is a true sclerosis, the result of interstitial inflammation, the ganglion cells undergoing pigmentary and fatty degeneration. He thinks this condition of the ganglia may be at times the cause of symptoms which are usually referred to degeneration of the cardiac muscle, and may also be the cause of certain cases of angina pectoris.—*Ibid*, October 1884.

APNEIC FORM OF RESPIRATORY CHOREA.—Under this title, Dr Ferrand (de Blois) describes a case which came under his notice. The patient was a boy of 20 years, who had been suddenly seized with illness. When first seen, he was sitting up gasping for breath, and cyanotic, with injected eyes. The hand was pressed over the precordia. The inspirations were sometimes rapid and short, at other times very deep. Then a brief period ensued, in which respiration was suspended, after which there was a deep and difficult inspiration. Auscultation revealed nothing in the lungs or heart, and the author discards the idea of the case being one of angina. The condition persisted—the attacks being more or less severe. After a careful consideration of the various views which might be taken, the author concludes by believing the case to be a neurosis of the nature of chorea, and analogous to Cheyne-Stoke's respiration.—*Gazette Médicale de Paris*, 11th October 1884.

DOUBLING OF THE HEART BEAT.—Stern describes two cases of this interesting affection, and gives a summary of the work which has been devoted to the subject. The phenomenon of double beat was first interpreted by Leyden to mean alternate systole of the ventricles, the left contracting before the right, as shown by the pulse; but after further investigation he announced the theory that both ventricles acted simultaneously with the first of the double sounds, while the right acted alone with the second. This theory has been endorsed by Malbranc, Gerhardt, Friedreich, Rosenstein, and Roy. Stern points out that neither anatomical structure nor nervous supply will allow such a theory as that of Leyden to be accepted, and cites against it also the fact that there is no hemisystole in the dying heart. Further, in one of his cases there was a pulsation with each of the systolic sounds in the carotid artery, although there was none in the radial, and he is therefore obliged to conclude with Bozzolo that there are two complete systoles, one following the other very rapidly, as the cause of the phenomenon. He explains the absence of the radial pulsation with the second beat by the fact that systole recurs so rapidly that there is no time for the left ventricle to refill, this being the more difficult, as there was in his two cases—which we believe to be always present in such—tricuspid regurgitation; this would still further diminish the quantity of blood going to the left side, while the systemic veins and right auricle would be surcharged and ready to pour their contents into the right ventricle.—*Deutsches Archiv für klinische Medicin*, 15th October 1884.

REGULARLY INTERMITTENT ALBUMINURIA.—Falkenheim narrates a very interesting case in which the urine passed during the day was perfectly normal, while that of the night was albuminous. Both liver and spleen were enlarged, the latter conspicuously so, but there was no ascites, and there was no change in the blood. Further observations showed that albumen was only present when the patient kept his bed, and that the posture influenced the albuminuria. When he lay on his back or on his right side there was no albumen; when he lay on his left side there was a great deal of albumen; and when he lay on his face there was none. Careful investigation of the case put it beyond doubt that the albuminuria was caused by the pressure of the enlarged spleen on the left renal vein.—*Deutsches Archiv für klinische Medicin*, 24th September 1884.

THE PATHOGENESIS OF EPILEPSY.—From experimental researches Rosenbach concludes that the convulsive seizures, which are produced by electrical stimulation of the brain, are the result of an excitation of the cortical centres, and that these convulsions are extremely like the so-called cortical and the idiopathic epilepsy of man; that there is no important difference between cortical and idiopathic epilepsy, but that to distinguish them the former may be termed *organic* and the latter *functional* epilepsy; that the convulsive attacks of epilepsy and of *petit mal* are the effects of primary excitation of the surface of the brain; that the protean tendency of the clinical picture of epilepsy is due to the difference in the nature and variation in the extent of the pathological excitation, and that the theory which localizes the disease in the centres of the medulla oblongata and pons varolii is incompatible with the clinical features of epilepsy, and based on incorrect observations.—*Archiv für pathologische Anatomie und Physiologie und für klinische Medicin*, 9th September 1884.

MEDICAL PERISCOPE.

BY FRANCIS TROUP, M.D.

PROFESSOR NAUNYN, *Berl. Klin. Wochenschrift*, No. 24, has tested antipyrin, corroborates Guttmann's statements, and extended its trial to cases of malarial fever, in which, however, it seems to be therapeutically worthless. It was used in six cases of intermittent; in one, a tertian, the fever remained away after 5 grammes had been taken; possibly the same event would have happened without antipyrin, as the second of the two attacks observed in the clinique was decidedly milder, and frequently it is to be remarked in intermittents that patients on admission to hospital lose their fever, for the time, without any medication whatever. In the other five cases the drug was a total failure; it did not even shorten the paroxysms, although given repeatedly in doses of 5 or more grammes, and at the most diverse times before the onset of the fit. Indeed, one patient took 25 grammes in twenty-four hours without perceptible curative effect. In experiments made on healthy persons, 5 gramme doses occasioned sweating; but temperature, instead of falling, rose about half a degree.

CASE OF CHYLURIA.—Dr Siegmund of Berlin reports the following case of this disease so seldom observed in our latitudes. Anamnestically there was not much to adduce. Patient, now aged 45, had never been in the tropics; between his 17th and 18th year had obstinate intermittent fever followed by exhausting, long-continued epistaxis; he was a year in France during the war, and had violent dysentery when in camp before Paris. Such were his antecedents. At Christmas 1882, after much previous complaint of extraordinary lassitude and unrest, frequent profuse perspirations, dragging sensations in the back, upper portion of the thighs, abdomen, and especially in the testicles, the urine became altered in appearance, looking muddy and white when newly passed; when examined its reaction was found to be weakly acid or alkaline, its sp. gr. from 1010–1015. Its colour was whitish yellow, equably turbid as urine is in which abundant urates are suspended. Boiling caused precipitation of a coagulum consisting of albumen and entangled fat; the supernatant fluid, however, did not become perfectly clear, but remained opalescent with finely divided fat; on dissolving out this by ether a gelatinous turbidity was still left, which depended on the presence of an albuminous body to which Prout has called attention, and which the analyses of Eggel and Brieger have demonstrated to be a fibrinogenous substance. Quantitative determinations of only four urinary constituents were made: chloride of sodium, urea, albumen, and fat, and the percentage of those bodies ranged within the following limits: chloride ·76–1·28, urea 1·35–2·72, albumen ·12–·22, and fat ·17–1·038. The fatty contents are seen to be of very large amount,—explicable partly by individuality, partly by the mode of collecting the urine which was adopted. Microscopically the urine showed lymph corpuscles, fat globules of small size and number, and a great quantity of it molecularly divided; a power of 900 revealed no vegetable or animal micro-organisms. This urine, which may be looked upon as urine *plus* chyle, was by no means the rule; in frequency and quantity it was far surpassed by another whose behaviour was perfectly normal, a urine decidedly acid, straw yellow or citron in colour, quite clear, without deposit or trace of albumen or fat or other heterogeneous elements. For sixty consecutive days the urine of every micturition was collected, catalogued, and labelled, according to its general character, as chylous urine, weakly chylous or normal; in this way Dr Siegmund has been enabled to observe the march of the chyluria more exactly than has hitherto happened. This proceeding had also the advantage that the chyle-urine was not diluted by the normal, as happens when the day and night specimens are simply mixed for examination; this also explains in part why the fatty contents bulk so largely. The result of this tabulation was the following:—

There were in all in those sixty days 428 measures of urine passed; 46 of these were chylous urines, 13 weakly chylous, and 369 free of chyle. Reckoning by days, 9 days were absolutely free of chyle, 7 nearly so; on the other days the urine was strongly chylous. The expression "weakly chylous" is used advisedly, because an opalescent urine, in which mere traces of albumen and fat were to be found, might give one the idea, were it passed immediately before or immediately after the chylous, in the first case that the chyle fountain had begun to flow, in the second that a remnant of the chylous urine had been in the bladder and been diluted by the succeeding normal urine. But there were 7 days of those 60 on which only this weak variety was obtained and not the strongly chylous one. Touching the length of time between the passing of chyle-urine and normal, the relationship was the following:—Chyle-urine made its appearance after normal, on an average, in 6¾ hours. Inverted, normal followed chylous, on the average, in 2½ hours. But the most material point to be inferred from the table was that chylous urine—of course Siegmund speaks only of his own patient—appeared almost without exception *only once* in 24 hours, and the time was from two to seven in the morning. This condition of this patient's urine as above described has remained about the same since beginning of 1883,—the general health somewhat better, the weakness and sweatings entirely so, the draggings in the limbs almost gone, and no other striking morbid phenomenon visible. What is of paramount interest in this case is the question as to the mode of origin, and more especially as to the place of formation of the chylous urine. Dr Siegmund is firmly convinced that neither any peculiar lesion of kidney can engender it, nor do the kidneys play a sort of intermediary *rôle,* that, in short, chylous urine as such has nothing to do with them. His grounds for thinking so are essentially the following:—It is known that in severe tropical cases coagula, consisting of albumen, fibrin, and blood, are formed within the bladder, and are of such density and size that they can only be evacuated *per urethram* with much painful straining. According to the prevalent conception these coagula are a derivative of the blood ejected through the kidneys. But a blood so highly rich in albuminates is unknown in any disease, and did it exist, it would be difficult to understand how it could pass the capillaries without causing dilacerations or obstructions, still less how it could flow through the kidneys in a continuous stream without embarrassing the glomeruli and urinary tubules, and driving the kidneys themselves into atrophy and degeneration; and yet the chylo-urinary process may go on for a long series of years. A Brazilian physician, Silva Lima, mentions a women who died at 80 after 50 years of chyluria, and during this long space of time there were no phenomena of blocking, or œdema, or uræmia. The sudden onset of the disease, often dating from a certain day, and the equally sudden cessation and intermission, are also unintelligible on this theory. Pathologico-anatomical accounts of the renal conditions are rare, because so few autopsies have been made; what have been made have turned out quite negative, or lesions have been found which were common to other diseases; and as chylo-urinary patients are subject to complications like others, so it has come about that a Bright's kidney or a tubercular lung has been observed, but never anything *sui generis*, nothing which would be a peculiar renal affection in combination with chyluria, and still less anything which could make intelligible the separation of chyle through the kidneys. It is also of great weight in this connexion that commonly none of the renal elementary constituents are to be found in the urine. Wucherer, it is true, tells of a few cases in which he says hyaline cylinders and casts of the tubules were found, and he thereupon concludes that the kidneys call forth this chylo-urinary condition, but these were not pure cases, but were forms of hæmatochyluria common in Brazil; moreover, none of his cases came to a post-mortem. If then the kidneys are excluded, nothing remains but a simple mechanical connexion—that, namely, at some point in the space between the renal pelvis and the beginning of the urethra two streams meet and mix. In *Virchow's Archiv*, Dr Havelburg reports a pregnant example of the possible existence of such a mechanical intermixture. A woman, æt. 32, who had lived 18 years in Brazil, complained of violent pains in abdomen. One day she felt something crack; immediately relief was experienced, and chyluria began. During its course the bladder wall prolapsed through the much dilated urethra, and in reponing it the orifice of the left ureter could be reached. A catheter introduced drew off a perfectly clear and normal urine, and Dr Havelburg concluded that the admixture took place in the bladder. The women died; the sectio was not complete, and the kidneys were not examined, but there was a large tumour in the abdomen, formed of many little cysts, connected with the bladder, which had many sacculations and manifold adhesions with lymph and chyle vessels. All those hollow spaces were filled with a chylous fluid, and the supposition of Dr Havelburg was corroborated. Among the more recent authors, Hoppe-Seyler inclines to this idea. If this view is accepted as virtually correct, it is no longer surprising that chyluria suddenly occurs when the fistula is fully formed, and as suddenly ceases when it is closed; that, after longer or shorter time, chyle again comes when the old route is anew pervious, or another one has been formed. On the other hand, the typical intermissions which happened in this case are left obscure; why should they have happened at a certain time, and that during the night? It was often thoroughly tested that the horizontal position was not the conditioning influence, for when this was kept during the day no chylous urine appeared, and yet it must be believed that here only mechanical relations operate. If it could be supposed that during the night a turgescence of the lymph and chyle vessels took place, or, contrarily, their walls became lax, then an ebb and flow of their contents could be understood. But about this physiology knows absolutely nothing, and even a provisional explanation of the fact cannot be given; but even if it could, then this mechanical view would only shove back the disease, the kidneys would be declared non-participant, and the affection would be relegated to the domain of the lymphatic system. But what here constitutes the proper cause of the disease, what conditions the formation of ecstasies, constrictions, and obstructions which lead to fistulæ, is yet in no wise explained, with the exception of those cases in which entozoa cause glandular enlargement and inflammation, thrombosis and dilatations of lymphatics, and anastomoses between lymph and bloodvessels. Comparing cases happening in our latitudes with those of the tropics, the difference is so great and so deep-reaching that we are justified in separating provisionally the two diseases, or at least to disjoin *Chyluria nostras* from *Chyluria endemica.* Dr Siegmund is unable to suggest any treatment.—*Berliner Klinische Wochenschrift,* No. 10, 1884.

Part Fifth.

MEDICAL NEWS.

Royal Colleges of Physicians and Surgeons, Edinburgh, and Faculty of Physicians and Surgeons, Glasgow.—The following gentlemen passed their final examination for the triple qualification in Medicine and Surgery at the sittings held on 31st October 1884, and were admitted L. R. C. P. & S. Ed. and L. F.P. & S. Glasg.:—Thomas Armstrong, Perth; Francisco Fernandes, Edinburgh; W. F. Freeman, Edinburgh; T. T. Hamilton, Bury; Wm. Henry Owen Mills, Edinburgh; Edward William Short, Edinburgh; Thomas Young, London; George de B. Watson, Edinburgh; Clement Hope Greatorex, Edinburgh; Henry Taylor Williamson, Scarborough.

Royal Colleges of Physicians and Surgeons, Edinburgh.—The following gentlemen passed their final examination for the double qualification in Medicine and Surgery at the sittings held in October 1884, and were admitted L.R.C.P. Ed. and L.R.C.S. Ed.:—Henry Harris, London, W.; John Macgregor, Edinburgh; Thomas William Riel, Portarlington; William Laugran, Dublin; Bernard Stevenson, Nottingham; Charles Cochrane Dickson, Galashiels; John Jones, Anglesea; Emmanuel Portal, Mauritius; James M'Caull, Belfast; Charles Spurgeon Davies, Edinburgh; William Danes, Manchester; Theophilus Edward Samuel Scholes, Edinburgh; Charles William Dean, Lancaster; George S. Page, Camalway Rectory, Co. Kildare; Alfred Ernest Woodforde, Reading; Digby Patrick F. French, Co. Galway; George Arthur Herbert Woodforde, Reading; Montague George Robinson, Grantham; Arthur Fowell Korner, Gloucestershire; John Cram, M.A., Dollar; Arthur Thomas White, Dublin; James Malcomson, Middlesbro'; Sewell Samuel M'Farlane, Bedford; Walter Benjamin Garvin, Edinburgh; William Kitson Clayton, Wakefield; John William Fawcitt, Thirsk, Yorks.; Ernest Blank, Isle of Man; James C. Shechan, Co. Cork; Peter Campbell, Dalmally, Argyle; Archibald Hood, Midlothian; James Innes Fullarton, Edinburgh.

Royal College of Physicians, Edinburgh.—The following gentlemen passed their final examination at the sittings held on November 6, 1884, and were admitted L. R.C. P. Ed.:—Joe Nicholson Kaye, Leeds; Arthur Joynson Barnard, Buxton, Derbyshire; Walter Robert Tytheridge, London; Edward Bains Holwell, Leeds; Henry Parkhouse, Kilburn; Charles Thomas Empey, Leeds; Charles Augustus Cæsar, Tottenham, Middlesex; Lionel de Courcy Eagles Harston, London; John Digby Marsh Swinburne, London; Thomas Charles Marsh, London; Samuel Smyth [illegible]

Gayley, Borrisokaire, Co. Tipperary; Edwin Pulleine Pickersgill, Sherburn, Yorkshire; Hubert Thomas Sells, Prestwich; James Leslie Callaghan, Dublin; Ralph Holyoake, Droitwich.

PORTRAIT OF PROFESSOR TURNER.—An excellent likeness of the shrewd, powerful face of our Professor of Anatomy has just been sent us by Mr Menzies of Glasgow. The artist is Mr Hanhart, who executed the portrait of Professor Maclagan noticed by us a month or two ago.

WE have received from Professor Struthers a copy of his recent introductory lecture on the Medical Systems of Canada, America, and Great Britain, reprinted from the *Aberdeen Free Press.* The most interesting and most important part of this reprint is that which discusses the recent attempts at medical legislation. It is certainly, as the Professor hints, somewhat difficult to understand why such legislation was called for. The Scottish Corporations, whose examinations were declared by interested and jealous Englishmen to be the *raison d'etre* for their demand, do not seem to have been at all in the rear of medical progress. Their example in forming a conjoint scheme has at last been followed by the English Corporations; and even the universities in Scotland do not appear to have been much in advance of them in the matter of refusing to grant separate qualifications. The examinations by each of the Corporations, says Professor Struthers, had always been complete, though the qualifications which it conferred was only a partial one in the eye of the law. The conjoint scheme now makes the qualification granted legally complete; but it is only two years since the universities, whose examinations were also complete, were granting degrees in medicine apart from degrees in surgery. Their graduates have now to take both degrees. Now that these reforms have been made, we trust, with Professor Struthers, that there will be no more of the divisions and heartburnings in the profession that the past two years have witnessed, and that our students may be enabled "to dismiss all anxiety from their minds, and to go on with their work undistracted by the thought of impending change."

ABERDEEN. — THE MEDICO-CHIRURGICAL SOCIETY.—At the annual meeting of the Aberdeen Medico-Chirurgical Society, held on 20th November, the following office-bearers were elected for the year:—President, Dr Struthers, Professor of Anatomy; Secretary and Treasurer, Dr Rodger; Librarian, Mr William Fraser, Surgeon; Council, Drs Beveridge, Jackson, Urquhart, Simpson, and M'Gregor; Representatives to the North of Scotland Medical Association, The President and Secretary *ex officiis*, Drs Reith and Garden, elected.

PROFESSOR ROY of Cambridge is anxious to receive subscriptions from the friends and admirers of the late Professor Cohnheim, for the purpose of erecting a fitting monument in Leipzig to his memory.

THE IDEAL DOCTOR.—1st, He must be a careful and accurate, and at the same time a keen and quick observer of nature. 2nd, He must be able to connect his isolated observations of fact by rapid, and at the same time trustworthy, processes of reasoning. 3rd, He must, in dealing with emergencies, endeavour to have always what the Greeks (and Dr John Brown after them) called *ἀγχίνοια*—nearness of the *νοῦς*, *i.e.*, presence of mind. 4th, He must, as a surgeon or accoucheur, have much deftness of manipulation—manual dexterity, as we call it; or perhaps still better, ambidexterity. 5th, He must treasure in his memory, and be constantly increasing from day to day, large stores of various reading in his own and other languages, in order that not only all past observations, but also the vast field of scientific progress in its relation to his art may be constantly before him, or at least freely accessible when wanted. 6th, He must be able to write, at the very least in his own native language, with vigour, compactness, and lucidity. 7th, He must have a soul above mere money-grubbing; must on no account degrade his profession into a trade; but must be, as far as is possible to human nature, the disinterested friend, the companion, the good genius, I had almost said, of all his patients. 8th, For this reason, if for no other, he must in every case have in him the distinctive essence of what is called a gentleman; and if his practice is, or is ever to be, among what are called the upper classes, he must be a gentleman not only in principle but in detail; not necessarily what is vulgarly and falsely often styled a fine gentleman, but a gentleman in outward manner as much as in the inner spirit. 9th, He must be a man endowed with a deep sense of moral responsibility, so as to beget confidence and unfailing trust in him on the part of his fellow-men. Responsibility, therefore, to them in the first instance; but underlying that, and sustaining it as surely as the root and the stem sustain the flower—a deeper and more latent responsibility to Him who is the source of all good, and, therefore, of all moral principle and moral responsibility whatever.—*By Professor Gairdner.*

OBITUARY.

DR MAGNUS SIMPSON.

It is with great regret that we record the death of Dr Magnus Simpson at the early age of 32. He was the youngest son of the late Sir James Young Simpson, and inherited no small share of his father's ability. He studied medicine at the University of Edinburgh, and graduated M.B. in 1876. As a student, he was a prominent member of the Royal Medical Society, and occupied successively the positions of Secretary and President. After graduating he took up the specialty of Eye diseases, and worked in the Eye wards of the Royal Infirmary; he also studied at Paris, and Moorfield's Hospital in London. Had he devoted himself to practice, he would have taken a high place in this department. His shrinking from work and the responsibilities of practice was no doubt largely due to an affection of the heart, which proved in the end the cause of his early death. He was a member of the St Andrew's Boat Club, and took a great interest in all manly sports. Those who knew him well will not soon forget his kindly and lovable disposition, and his hatred of all sham and affectation.

GEORGE LUMGAIR, M.D., L.R.C.S. EDIN.

ON the morning of the 1st November there passed away from the village of Largo Dr George Lumgair, the oldest member of his profession in Fifeshire, as well as one of its greatest ornaments. Born at Arbroath in 1818, he proceeded when very young to Edinburgh, where he studied medicine at the University and the College of Surgeons; and, at the early age of 19, he settled down to country practice in Upper Largo, the well-known and beautiful watering-place on the coast of Fife. For the long period of forty-seven years he laboured there, hardly ever a day off duty, though a great martyr to bronchial asthma. A few years ago he secured as his assistant Dr Stuart Palm, who latterly became his son-in-law and partner, and it was hoped that he had many years of quiet old age before him; but the strain had been relaxed too late, and when the rest came, the signs came too that his work was over; and after nine months of unmurmuring suffering, he died in his 67th year.

In addition to the local medical appointments he held, he was unanimously elected first President of the Fifeshire Medical Association when that body was constituted in 1882; and about the same time he was appointed a Justice of the Peace for the county. It is given to few of our country practitioners to be so widely known and so deeply respected as was Dr Lumgair. In his large practice his name was indeed a household word, and his bright smile and kindly, hopeful manner, won the affection of all classes of his patients as his skilful care commanded their confidence. His professional brethren in this and the neighbouring counties recognised his many-sided ability, and gladly sought his help in consultation,—sympathizing rather with the feeling of the laity, that to have "seen Lumgair" was the *ultima thule* of human means. At such times his lively interest and his comprehensive grasp of the case made it no mere form to have his opinion; and the writer likes to recall, as many will, how thoroughly his unfailing courtesy and his ready tact induced him to confirm rather than shake the patient's trust in his own physician.

In spite of hard work he kept abreast of younger men, but his more intimate medical friends in Edinburgh were of a generation of whom few, alas, survive. An accurate physician, an able surgeon, and an accomplished accoucheur, his wonderful experience and his extensive knowlege of human nature made him a power far beyond his immediate neighbourhood; and his enthusiasm in this work, and his interest in the welfare of the people amongst whom he spent his life, will not soon be forgotten.